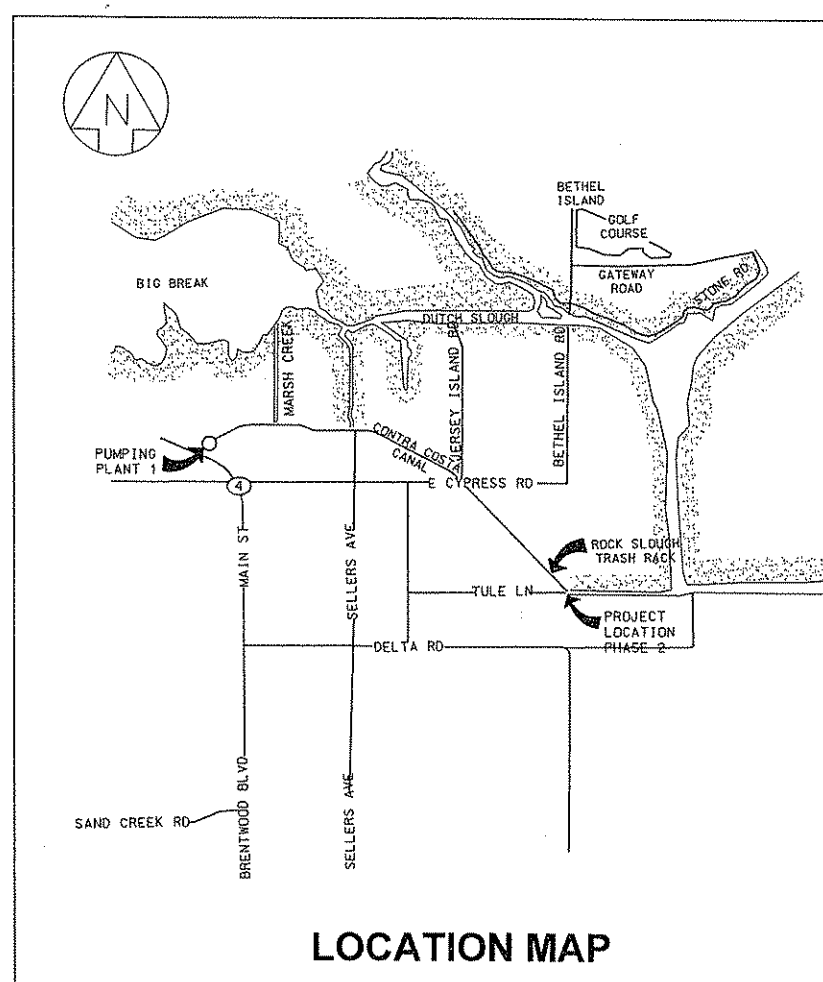



## A black and white vicinity map of the San Francisco Bay Area. The map shows major highways (Interstates 5, 805, 680, 580, 880, 92, 205, 238, 242, 24) and local roads (Highways 12, 4, 150). Key locations labeled include Grizzly Bay, Suisun Bay, Benecia, Martinez, Concord, Walnut Creek, Pleasant Hill, Lafayette, Berkeley, Brinda, Oakland, Danville, San Ramon, Dublin, Livermore, Pleasanton, Black Diamond Mines Regional Park, Brentwood, Oakley, Antioch, Pittsburg, and Tracy. A north arrow is located in the top left corner. A large black dot marks the "PROJECT SITE" near the intersection of Highway 150 and Highway 4, with an arrow pointing from the label to it.



NO.	DWG NO.	SHEET NO	SHEET TITLE
1.	D-13025	G-1	DRAWING INDEX, LOCATION AND VICINITY MAP
2.	D-13026	G-2	GENERAL SYMBOLS AND KEY MAP
3.	D-13027	G-3	GENERAL NOTES AND ABBREVIATIONS
4.	D-13028	G-4	SITE ACCESS
5.	D-13029	G-5	CONSTRUCTION EASEMENTS
5A.	D-13029A	G-6	CONSTRUCTION EASEMENTS
6.	D-13030	C-1	EXISTING SITE PLAN AND SURVEY CONTROL
7.	D-13031	C-2	CLEAR AND GRUB LIMITS - DEMO- ACCESS ROAD REPAIR (1 OF 2)
8.	D-13032	C-3	CLEAR AND GRUB LIMITS - DEMO - ACCESS REPAIR (2 OF 2)
9.	D-13033	C-4	ENVIRONMENTAL CONSTRAINTS (1 OF 2)
10.	D-13034	C-5	ENVIRONMENTAL CONSTRAINTS (2 OF 2)
11.	D-13035	C-6	GRADING PLAN
12.	D-13036	C-7	EAST AND WEST SETBACK LEVEE PROFILE
13.	D-13037	C-8	EAST LEVEE SECTIONS (1 OF 3)
14.	D-13038	C-9	EAST LEVEE SECTIONS (2 OF 3)
15.	D-13039	C-10	EAST LEVEE SECTIONS (3 OF 3)
16.	D-13040	C-11	WEST LEVEE SECTIONS (1 OF 1)
17.	D-13041	C-12	EAST (ROCK SLOUGH) COFFERDAM SECTION
18.	D-13042	C-13	WEST ROCK SLOUGH EXTENSION COFFERDAM SECTION
19.	D-13043	C-14	NORTH (CONTRA COSTA CANAL) COFFERDAM SECTION
20.	D-13044	C-15	COFFERDAM DETAILS
21.	D-13045	C-16	CIVIL DETAILS 1
22.	D-13046	C-17	CIVIL DETAILS 2 IRRIGATION STANDPIPE
23.	D-13047	C-18	CIVIL DETAILS 3
24.	D-13048	C-19	CIVIL DETAILS 4
25.	D-13049	C-20	TEMPORARY IRRIGATION AND BYPASS PUMPING PLAN
26.	D-13050	C-21	WATER QUALITY STATION
27.	D-13051	C-22	FENCING DETAILS
28.	D-13052	C-23	PHOTOS

## DRAWING INDEX

PROJECT MANAGER						ENGINEERING MANAGER						
DATE: 07/13/2009	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER			CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA			
						CHECKED BY: P. BELLOWES						
						DRAWN BY: F. BURKE						
						CHECKED BY: C. JOYCE						
						PROJECT NO.: 109065	SCALE: AS SHOWN					
						CAL GRID:	ASSESSOR'S BOOK:					
	1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009							
	D	ISSUED FOR BID				CAD FILE: D:\X-PSFH-G1	PLOT DATE: 9/22/2009 11:23 AM					
						SHEET 1 OF 2		DRAWING NO. D-13025		CONSULTANT NO. G-1		REV. 1

SYMBOLS LEGEND

CONSTRUCTION EASEMENT

USBR ROW LINE

MATCH LINE

CENTER LINE

SECTION OUTLINE, BOUNDARY OR FUTURE EQUIPMENT AND MATERIALS

CLEAR AND GRUB AND RIP RAP REMOVAL

NEW PIPING

EXISTING PIPING, EQUIPMENT OR STRUCTURES

EXISTING PIPING TO BE ABANDONED OR REMOVED UNDER THIS CONTRACT. ABANDONED WHEN NOT IN CONFLICT WITH NEW CONSTRUCTION WORK.

FENCE

AC PAVEMENT IN PLAN

NATURAL GROUND/UNDISTURBED EARTH

SWALE OR DITCH

EMBANKMENT

CONSTRUCTION JOINT

SL=.01

PIPING SLOPE (.01 FT. VERTICAL TO 1 FT. HORIZONTAL)

EXISTING EQUIPMENT OR MATERIALS TO BE REMOVED/RELOCATED UNDER THIS CONTRACT

CLEAR AND GRUB LIMIT

NEW GRADE CONTOURS

EXISTING GRADE CONTOURS

(SCREENED EXISTING)

AT

AND

ROUND OR DIAMETER

ANGLE

CENTER LINE

PLATE OR PROPERTY LINE

OVERHEAD POWER LINES

POWER POLE

UNDERGROUND GAS

WETLAND AREA TO BE FILLED

SECTION LETTER

DRAWING WHERE SECTION APPEARS

SECTION LETTER

DRAWING FROM WHICH SECTION WAS TAKEN

DETAILS ARE CROSS REFERENCED IN A SIMILAR MANNER, EXCEPT THAT DETAILS ARE IDENTIFIED BY NUMBER RATHER THAN BY LETTER.

NOTE:

1. SYMBOLS ARE FOR REFERENCE ONLY. NOT ALL SYMBOLS ARE USED IN THESE CONTRACT DRAWINGS.

PUMP TEST MONITORING WELLS

CONE PENETROMETER TEST

PROJECT TEST BORES

PROJECT CONTROL POINT

BROWN AND CALDWELL

CONFORMED

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

DATE: 07/13/2009

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER
					CHECKED BY: P. BELLOWS
					DRAWN BY: F. BURKE
					CHECKED BY: C. JOYCE
					PROJECT NO.: 109065
					CAL GRID: AS SHOWN
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	ASSESSOR'S BOOK
0	ISSUED FOR BID				CAD FILE: D:\TSPH\G2
					PLOT DATE: 9/23/2009 11:23 AM

CONTRA COSTA WATER DISTRICT

CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2

LEVEES AND COFFERDAMS

CONTRA COSTA CANAL, CVPIA, CA

GENERAL SYMBOLS AND KEY MAP

SHEET 2 OF 28

DRAWING NO. D-13026

CONSULTANT NO. G-2

REV. 1

GENERAL NOTES

1. THE LOCATION, MATERIAL INDICATED, AND/OR ELEVATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS AND REFERENCE DRAWINGS ARE APPROXIMATE ONLY. INFORMATION WAS TAKEN FROM PLANS AND RECORDS OF THE VARIOUS UTILITIES AND AGENCIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES SO THAT THOSE COMPANIES MAY MARK THE LOCATIONS OF THEIR LINES PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600 AT LEAST TWO WORKING DAYS BEFORE EXCAVATING. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY APPROVALS AND/OR PERMITS, PROTECT THE EXISTING FACILITIES, AND TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION IN THAT LOCATION.

2. CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL UTILITIES EXPOSED DURING CONSTRUCTION.

3. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNATED FOR DEMOLITION AND REMOVAL AND REPLACEMENT. ALL DAMAGED EXISTING IMPROVEMENTS AND THOSE IMPROVEMENTS WHICH HAVE BEEN REMOVED OR TEMPORARILY RELOCATED SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION EQUAL OR BETTER THAN PRIOR TO CONSTRUCTION. IMPROVEMENTS DESIGNATED FOR DEMOLITION SHALL BE DEMOLISHED AND DISPOSED OF BY THE CONTRACTOR.

4. PROPERTY LINES INCLUDED IN THESE DRAWINGS ARE ONLY A GRAPHIC REPRESENTATION OF AVAILABLE PUBLIC RECORD. THEIR LOCATIONS ARE NOT BASED ON FIELD SURVEYS, IN-DEPTH RESEARCH OR ANALYSIS OF LEGAL DOCUMENTS. A FORMAL COMPREHENSIVE BOUNDARY SURVEY WAS NOT PERFORMED TO DETERMINE THE EXACT LOCATIONS OF PROPERTY LINES. CONTRACTOR SHALL STAKE PROPERTY LINES AND EASEMENTS ACCORDING TO THE PLAT MAP AND LEGAL DESCRIPTIONS INCLUDED IN APPENDIX C IN THE PROJECT SPECIFICATIONS, AND DRAWING G-5.

5. CONTOURS FOR THE BOTTOM OF CHANNEL NORTH OF ROCK SLOUGH TRASH RACK WERE DERIVED FROM CROSS SECTIONS(SOUNDINGS) TAKEN AT 200 FT. INTERVALS ALONG THE CANAL.

6. THE AERIAL TOPOGRAPHY FROM CYPRESS ROAD TO THE TRASH RACK SHOWN HEREON WAS PROVIDED BY HAMMON, JENSEN, WALLEN & ASSOCIATES, INC. (DATE OF PHOTOGRAPHY WAS MARCH 23, 2006.) AND INFORMATION FOR THE TRASH RACK TO AND INCLUDING ROCK SLOUGH WAS PROVIDED BY CCWD AND USBR. PORTIONS OF THE TOPOGRAPHY ARE EXTRAPOLATION OF ADJACENT LANDS AND WERE NOT SURVEYED AS PART OF THE DESIGN.

7. THE CONTRACTOR SHALL CLEAR AND GRUB PER SPEC SECTION 02111 AND WHERE SHOWN ON THE PLANS.

8. USCG-APPROVED PERSONAL FLOTATION DEVICE/WATER SAFETY FOR CANALS - WHEN ENOUGH WATER IS PRESENT FOR EMERSION OR ENGULFMENT HAZARD, ANY INDIVIDUAL ENTERING INSIDE THE PERMETER OF THE LINED OR UNLINED CONTRA COSTA CANAL MUST WEAR A FLOTATION DEVICE AT ALL TIMES. THIS AREA INCLUDES, BUT IS NOT LIMITED TO, THE BANKS OF THE UNLINED CANAL, ROCK SLOUGH, WATER QUALITY MONITORING STATION, AND STRUCTURES SUCH AS THE ROCK SLOUGH TRASH RACK THAT CROSSES OVER THE CANAL.

9. CONTRACTOR SHALL PERFORM THE REQUIRED WORK TO COMPLETE THE PROJECT ACCORDING TO THE SEQUENCE AND CONSTRAINTS LISTED IN SPEC SECTION 01010, SECTION 01060, AND ASSOCIATED PERMITS OBTAINED FOR THIS PROJECT.

10. CONTRACTOR SHALL MAINTAIN VERTICAL AND HORIZONTAL CLEARANCES OF 15 FEET FROM WAPA AND 10 FEET FROM PG&E OVERHEAD POWER LINES. CONTRACTOR TO CONTACT WPA TO OBTAIN ACTUAL CLEARANCE OF OVERHEAD 69 KV POWERLINES.

11. PROJECT AREA MAY CONTAIN ENDANGERED OR THREATENED SPECIES INCLUDING, BUT NOT LIMITED TO, GIANT CARTER SNAKE, BURROWING OWL NESTS AND NESTING RAPTORS. DISTRICT WILL PERFORM A BIOLOGICAL SURVEY BEFORE AND DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION ADMINISTRATOR IF ANY PROTECTED SPECIES ARE FOUND DURING CONSTRUCTION. ADJUST WORK AS DIRECTED BY CONSTRUCTION ADMINISTRATOR TO AVOID DISRUPTION OF SPECIES. SEE SPECIFICATION SECTION 01060. ALL CONTRACTOR PERSONNEL SHALL UNDERGO ENVIRONMENTAL AWARENESS TRAINING PRIOR TO PARTICIPATION IN CONSTRUCTION PER SPEC SECTION 01060.

12. CONTRACTOR SHALL CONFINE WORK TO USBR ROW AND IDENTIFIED TEMPORARY CONSTRUCTION EASEMENTS.

13. CONTRACTOR SHALL REFER TO SPEC SECTION 01060 AND APPENDIX C OF SPECIFICATIONS TO BECOME FAMILIAR WITH CONSTRUCTION EASEMENT REQUIREMENTS AND RESTRICTIONS.

14. CONTRACTOR IS ADVISED THAT ACCESS TO ALL OR PORTIONS OF THE SITE MAY BE LIMITED DURING WET WEATHER.

15. PG&E TO RELOCATE POWER POLES. CONTRACTOR SHALL COORDINATE ACTIVITIES WITH PG&E. CONTRACTOR SHALL PROVIDE "CAUTION OVERHEAD ELECTRIC" SIGNS TO IDENTIFY OVERHEAD POWERLINES.

16. WAPA LINES TO BE PROTECTED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES WITH WAPA AND SHALL PROVIDE "CAUTION OVERHEAD ELECTRIC" SIGNS TO IDENTIFY OVERHEAD POWERLINES.

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
AB	AGGREGATE BASE
A/B	AS BUILT
AC	ASPHALT CONCRETE OR ASBESTOS CEMENT
ACI	AMERICAN CONCRETE INSTITUTE
AI	ASPHALT INSTITUTE
AIA	AMERICAN INSTITUTE OF ARCHITECTS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
API	AMERICAN PETROLEUM INSTITUTE
AISI	AMERICAN IRON & STEEL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
APN	ASSESSOR'S PARCEL NUMBER
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
APPROX	APPROXIMATELY
AR	AIR RELIEF
AREA	AMERICAN RAILWAY ENGINEERING ASSOCIATION
ASA	AMERICAN STANDARDS ASSOCIATION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
B&S	BELL & SPIGOT
B/SW	BACK OF SIDEWALK
BC	BEGINNING OF CURVE
BM	BENCH MARK
BO	BLOW-OFF
BFV	BUTTERFLY VALVE
BW	BOTTOM OF WALL
CCCFCD	CONTRA COSTA COUNTY FLOOD CONTROL DISTRICT
CCWD	CONTRA COSTA WATER DISTRICT
CDF	CONTROLLED DENSITY FILL
CB	CATCH BASIN
CD	CONTROL DENSITY FILL
CID	CAST IRON OUTSIDE DIAMETER
CIP	CAST IRON PIPE
CIPP	CAST IN PLACE PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONT	CONTINUATION
CP	CONTROL POINT
CTB	CEMENT TREATED BASE
(D)	DRAIN
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DET	DETAIL
DFG	DEPARTMENT OF FISH AND GAME
DI	DUCTILE IRON
DIA	DIAMETER
DISC	DISCONNECT
DWG	DRAWING
DWR	DEPARTMENT OF WATER RESOURCES
(E)	EXISTING
E	ELECTRIC, EASTING
EBRPD	EAST BAY REGIONAL PARKS DISTRICT
EC	END OF CURVE
EF	EACH FACE
EG	FOR EXAMPLE, EXISTING GRADE
EL	ELEVATION
ELEV	ELEVATION
ELL	ELBOW
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EQ	EQUAL
ETS	ELECTROLYSIS TEST STATION

EST	ESTIMATE
EW	EACH WAY
EXIST	EXISTING
FC	FACE OF CURB
FDP	FEEDER DISTRIBUTION PANEL
FE	FEMALE END
FH	FIRE HYDRANT
FBE	FLANGED BOTH ENDS
FL	FLOW LINE
FLG	FLANGE
FOE	FLANGED ONE END
FS	FINISHED SURFACE
FT	FEET
G	GAS
GALV	GALVANIZED
GV	GATE VALVE
H	HORIZONTAL
HE	HUB END
HGL	HYDRAULIC GRADE LINE
HHW	HIGHER HIGH WATER
HP	HIGH POINT
HWY	HIGHWAY
ID	INSIDE DIAMETER
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
INV	INVERT
IP	IRON PIPE
IPCEA	INSULATED POWER CABLE ENGINEERS' ASSOCIATION
ISD	IRONHOUSE SANITARY DISTRICT
JO	JOB ORDER
JP	JOINT POLE
KV	KILOVOLT
L	LENGTH
LEB	LARGE END BELL
LOL	LAYOUT LINE
Lp	PROJECTED LENGTH
MA	MALE END
MAX	MAXIMUM
MCP	MONOLITHIC CONCRETE POUR
MD	MAIN DISCONNECT
MH	MANHOLE
MON	MONUMENT
ME	MILLED EACH END
MIN	MINIMUM
MBA	MINIMUM BEARING AREA
MOA	MILLED OVER ALL
MJ	MECHANICAL JOINT
MO	MAINTENANCE ORDER
MOE	MILLED ONE END
MT	MALE THREAD
N	NORTHING
(N)	NEW
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
PE	POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
POE	PLAIN ONE END
PP	POWER POLE
PP1	PUMPING PLAN NO. 1
PRV	PRESSURE REDUCING VALVE
PS	PUMPING STATION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	RECLAMATION DISTRICT
REINF	REINFORCEMENT
RI	RODDING INLET
RET	RETURN
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RR	RUBBER RING, RAILROAD
RT	RING-TITE
RW	RAW WATER
RWW	RAW WATER VAULT
S	SLOPE
SAE	SOCIETY OF AUTOMOTIVE ENGINEERS
SCC	STEEL PIPE, CEMENT LINED, CEMENT COATED
SCH	SCHEDULE
SCM	STEEL PIPE, CEMENT LINED, ASPHALT MASTIC COATED
SCW	STEEL TAPE WRAPPED PIPE
SD	STORM DRAIN
SEB	SMALL END BELL
SHT	SHEET
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
SW	SOLVENT WELD
S/W	SIDEWALK
T	TELEPHONE
T&B	TOP AND BOTTOM
TBE	THREADED BOTH ENDS
TBM	TEMPORARY BENCH MARK
TBO	TEMPORARY BLOW-OFF
TC	TOP OF CURB OR TANGENT TO CURVE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEMP	TEMPORARY
TIP	TIP OF SHEET PILE
TOE	THREADED ONE END
TOP	TOP OF SHEET PILE WALL
TJ	TYTON JOINT
TYP	TYPICAL
TW	TOP OF WALL
UL	UNDERWRITERS LABORATORY, INC.
USBR	UNITED STATES BUREAU OF RECLAMATION
USCG	UNITED STATES COAST GUARD
V	VERTICAL
VAR	VARIES
VCP	VITRIFIED CLAY PIPE
W	WATER
WAPA	WESTERN AREA POWER AUTHORITY
WSTP	WATERSTOP
WM	WATER METER
W/	WITH
W/O	WITHOUT

BROWN AND CALDWELL

CONFORMED

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER
					CHECKED BY: P. BELLOWS
					DRAWN BY: F. BURKE
					CHECKED BY: C. JOYCE
					PROJECT NO.: 109085
					SCALE: AS SHOWN
					CAL GRID:
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	ASSESSOR'S BOOK:
0	ISSUED FOR BID				CAD FILE: D:\X-FSPH1-G3
					PLOT DATE: 8/22/2009 11:24 AM



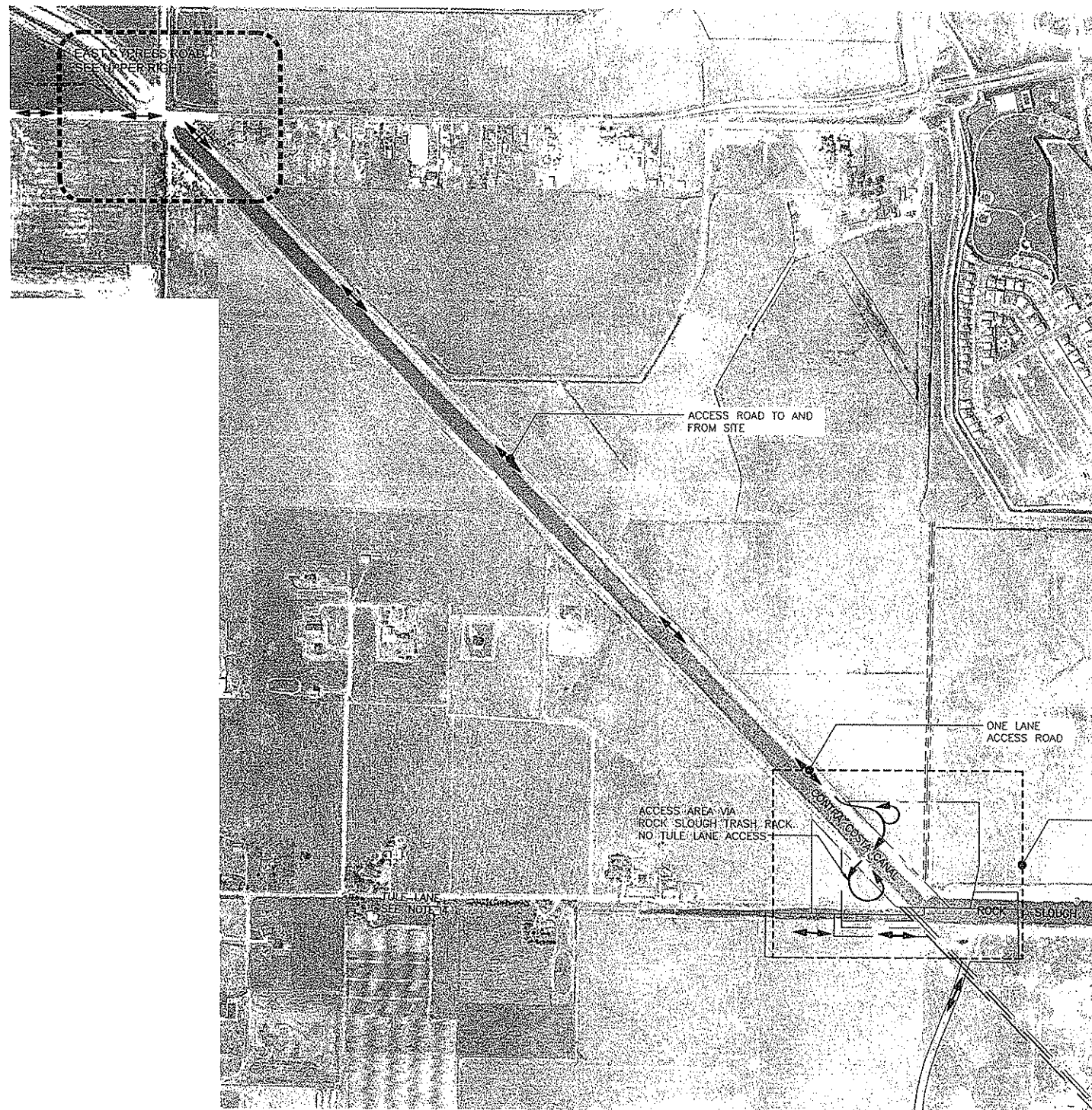
CONTRA COSTA WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPJA, CA

GENERAL NOTES AND ABBREVIATIONS

SHEET	DRAWING NO.	CONSULTANT NO.	REV.
3	0-13027	6-3	1
OF 28			





PLAN  
SCALE: 1"=500'

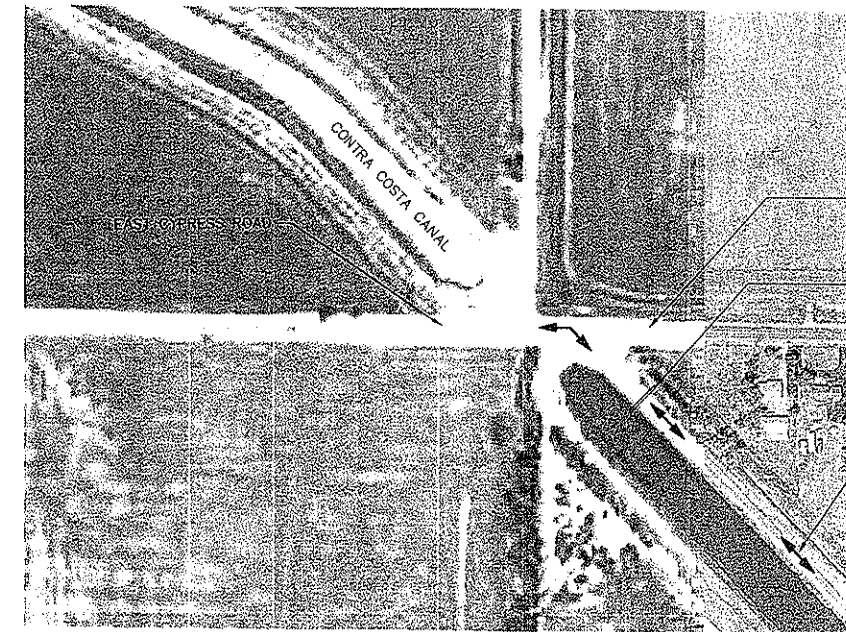
#### PROJECT ACCESS NOTES

- CONTRACTOR SHALL SECURE THE ACCESS GATES AT THE SITE WITH A PADLOCK AT ALL TIMES EXCEPT WHEN IMMEDIATE ACCESS IS NECESSARY. SEE SPECIFICATION SECTION 01500.
- PORTIONS OF CANAL EMBANKMENT SHALL BE MODIFIED TO PROVIDE CONTRACTOR ACCESS TO AND FROM SITE. SEE SHEETS C-2 AND C-3.
- FOR TCE LIMITS, SEE SHEET G-5 AND SHEET G-6.
- NO ACCESS FROM TULE LANE.
- CONTRACTOR SHALL ACCESS THE PROJECT FROM EAST CYPRESS ROAD AS SHOWN ABOVE. CONTRACTOR SHALL COMPLY WITH TRAFFIC MANAGEMENT PLAN PER SPEC SECTION 01060.
- CONTRACTOR SHALL COMPLY WITH APPROVED HAULING ROUTE AND HAULING PERMIT CONDITIONS OUTLINED IN SPEC SECTION 01500.
- CONTRACTOR SHALL GRADE EARTHEN RAMPS AS NEEDED. MAXIMUM SLOPE OF RAMPS SHALL BE 20:1. CONTRACTOR SHALL LEAVE RAMPS IN PLACE AT END OF WORK.
- TRASH RACK TRUCK LOADS SHALL BE H-20 OR LESS WITH STANDARD WIDTH EQUIPMENT, SEE DET 2/C-18 FOR LIMITATIONS.

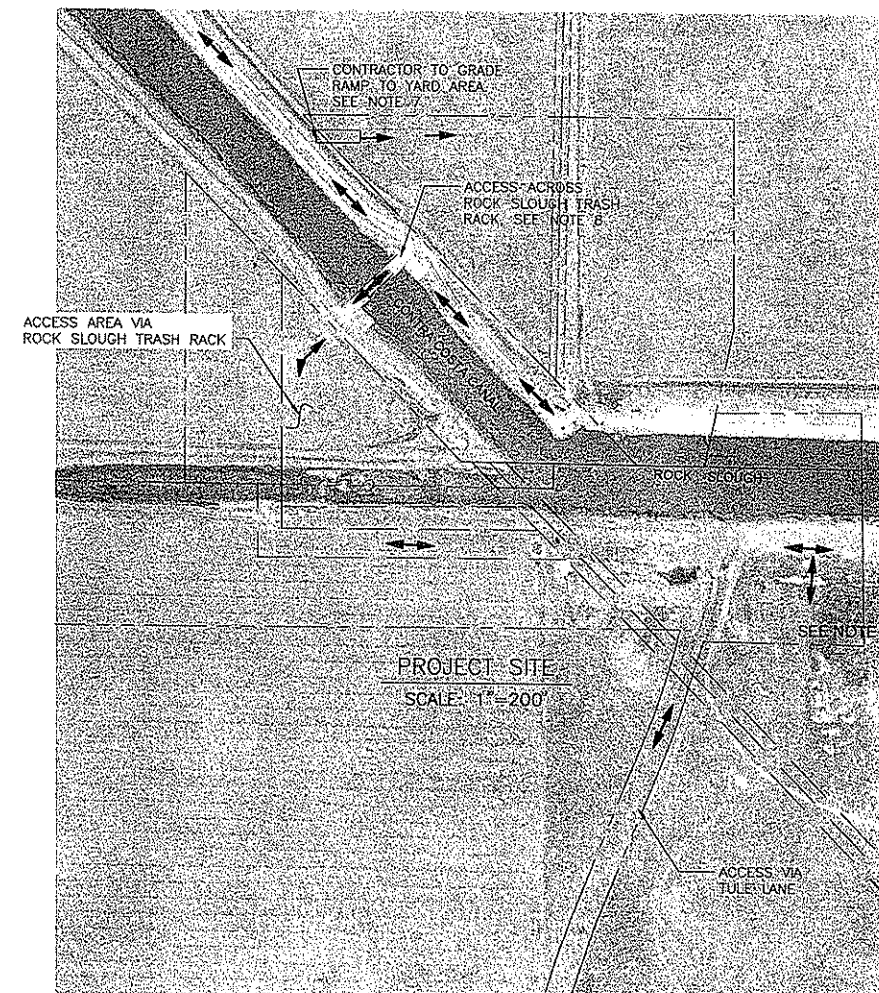
BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)



EAST CYPRESS ROAD  
SCALE: 1"=200'



PROJECT SITE  
SCALE: 1"=200'

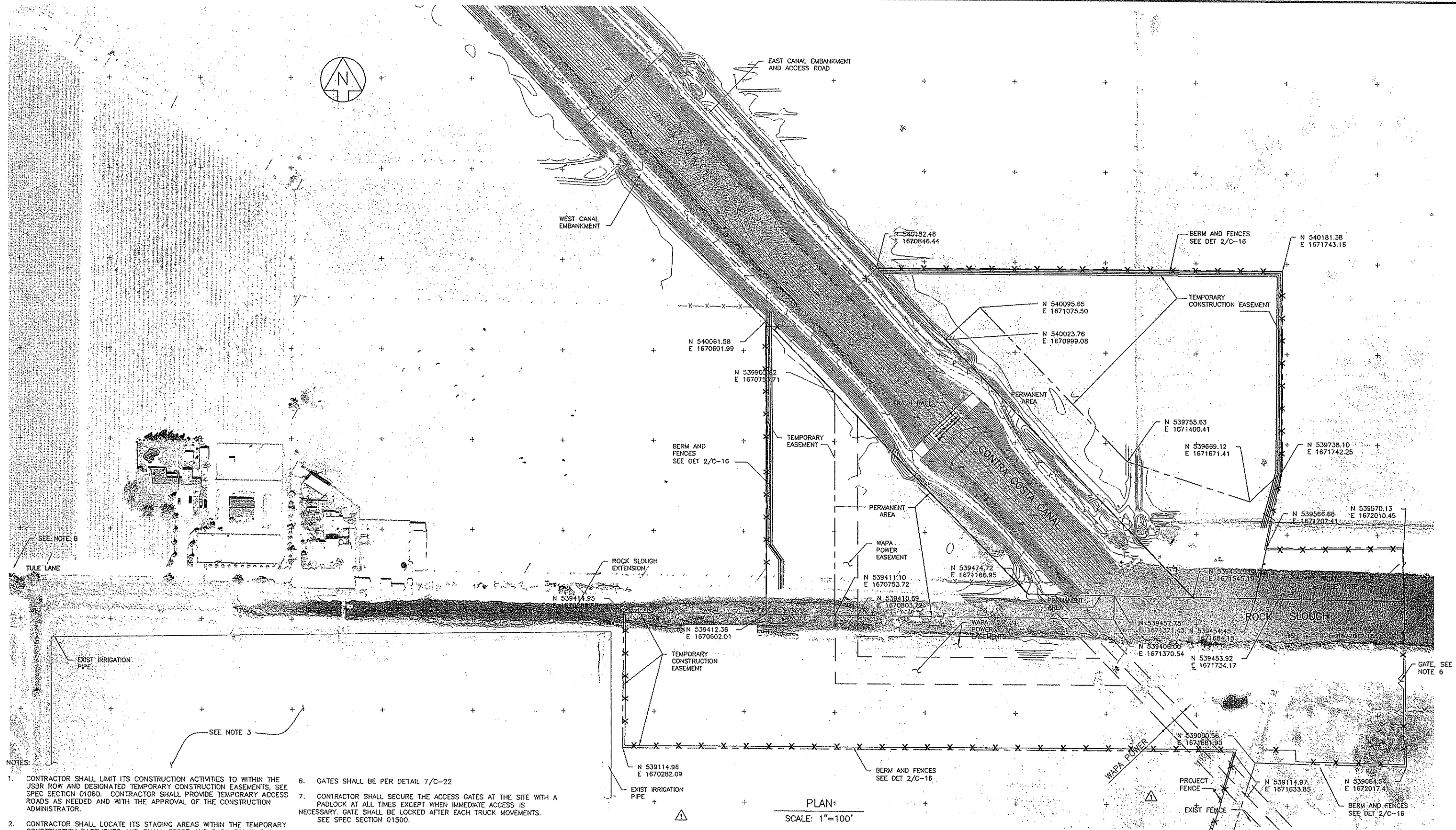
REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER	CHECKED BY: P. BELLOWS	DRAWN BY: F. BURKE	CHECKED BY: C. JOYCE	PROJECT NO.: 109065	SCALE: AS SHOWN	CAL GRID:	ASSESSOR'S BOOK:	CAD FILE: D-X-FSPH1-G4	PLOT DATE: 9/23/2009 11:25 AM
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1	REVISED PER ADDENDUM 1	CJ	PB1	07-09										
0	ISSUED FOR BID													
DATE: 07/13/2009														
											SHEET 04 OF 28			
											DRAWING NO. D-13028			
											CONSULTANT NO. G-4			
											REV. 2			

CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPIA, CA

SITE ACCESS

Path: u:\Consultants\109065 COW Phase 2 Fish Screen\2-SHE File: D-X-FSPH1-G5 Plot date: Sep 23, 2009-11:27:24am CAD User: postori.  
Xref File: X-TBLOCK-22X34 X-Topo\_canal Replacement\_nod 27 X-Fence X-Property



NOTES:




1. CONTRACTOR SHALL LIMIT ITS CONSTRUCTION ACTIVITIES TO WITHIN THE USER ROW AND DESIGNATED TEMPORARY CONSTRUCTION EASEMENTS, SEE SPEC SECTION 01060. CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS ROADS AS NEEDED AND WITH THE APPROVAL OF THE CONSTRUCTION ADMINISTRATOR.
2. CONTRACTOR SHALL LOCATE ITS STAGING AREAS WITHIN THE TEMPORARY CONSTRUCTION EASEMENTS AND SHALL STORE AND PARK EQUIPMENT, MACHINERY, MATERIAL, AND VEHICLES WITHIN THE STAGING AREAS. SEE SPEC SECTION 01500.
3. 100 FT SOUTH OF SLOUGH WILL BE ACTIVELY IRRIGATED USING FLOOD IRRIGATION BY OTHERS.
4. SEE SHEET G-4 FOR SITE ACCESS AND HAUL ROUTE INFORMATION AND SPEC SECTION 01500.
5. CLEAR AND GRUB ALL TEMPORARY CONSTRUCTION EASEMENTS AND PERMANENT AREAS PER SPEC SECTION 02111 AND AS SHOWN ON DRAWINGS C-2 AND C-3. SEE SPEC SECTION 01010.
6. GATES SHALL BE PER DETAIL 7/C-22
7. CONTRACTOR SHALL SECURE THE ACCESS GATES AT THE SITE WITH A PADLOCK AT ALL TIMES EXCEPT WHEN IMMEDIATE ACCESS IS NECESSARY. GATE SHALL BE LOCKED AFTER EACH TRUCK MOVEMENTS. SEE SPEC SECTION 01500.
8. NO ACCESS TO ANY PART OF THE WORK FROM TULE LANE

CONFORMED

BROWN AND CALDWELL

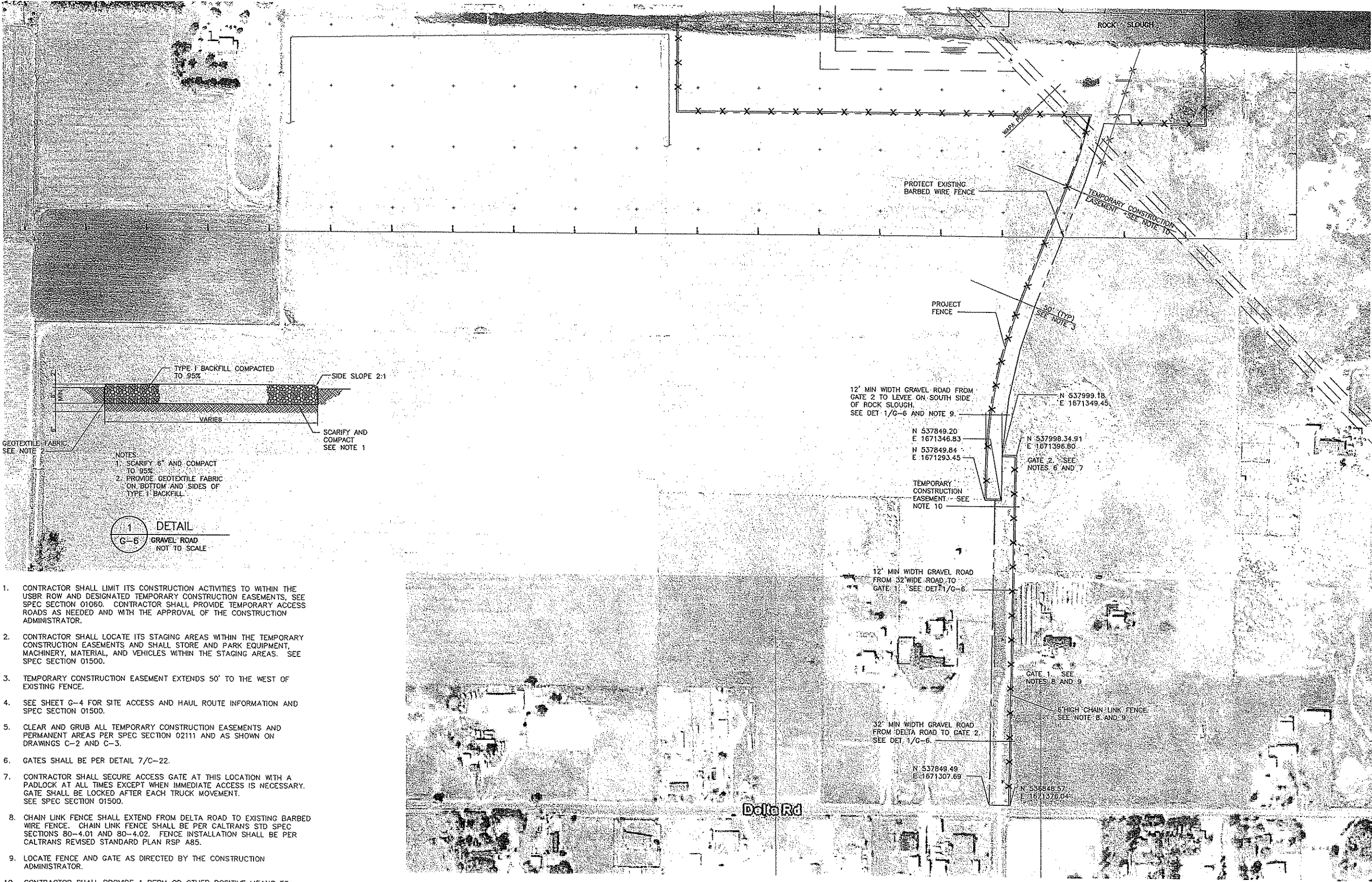
PLAN+  
SCALE: 1"=100'

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER	 CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA				
						CHECKED BY: P. BELLWS					
						DRAWN BY: F. BURKE					
						CHECKED BY: C. JOYCE					
							PROJECT NO. 109065	SCALE: 1" = 100'			
						CAL GRID:	ASSESSOR'S BOOK:	FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA			
		CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009				CONSTRUCTION EASEMENTS		
		REVISED PER ADDENDA 1	CJ	PB	07/09						
DATE: 07/13/2009	0	ISSUED FOR BID				CAD FILE: D-X-FSPH1-G5	PLOT DATE: 9/23/2009 11:27 AM	SHEET 05 OF 28	DRAWING NO. D-13029	CONSULTANT NO. G-5	REV. 2



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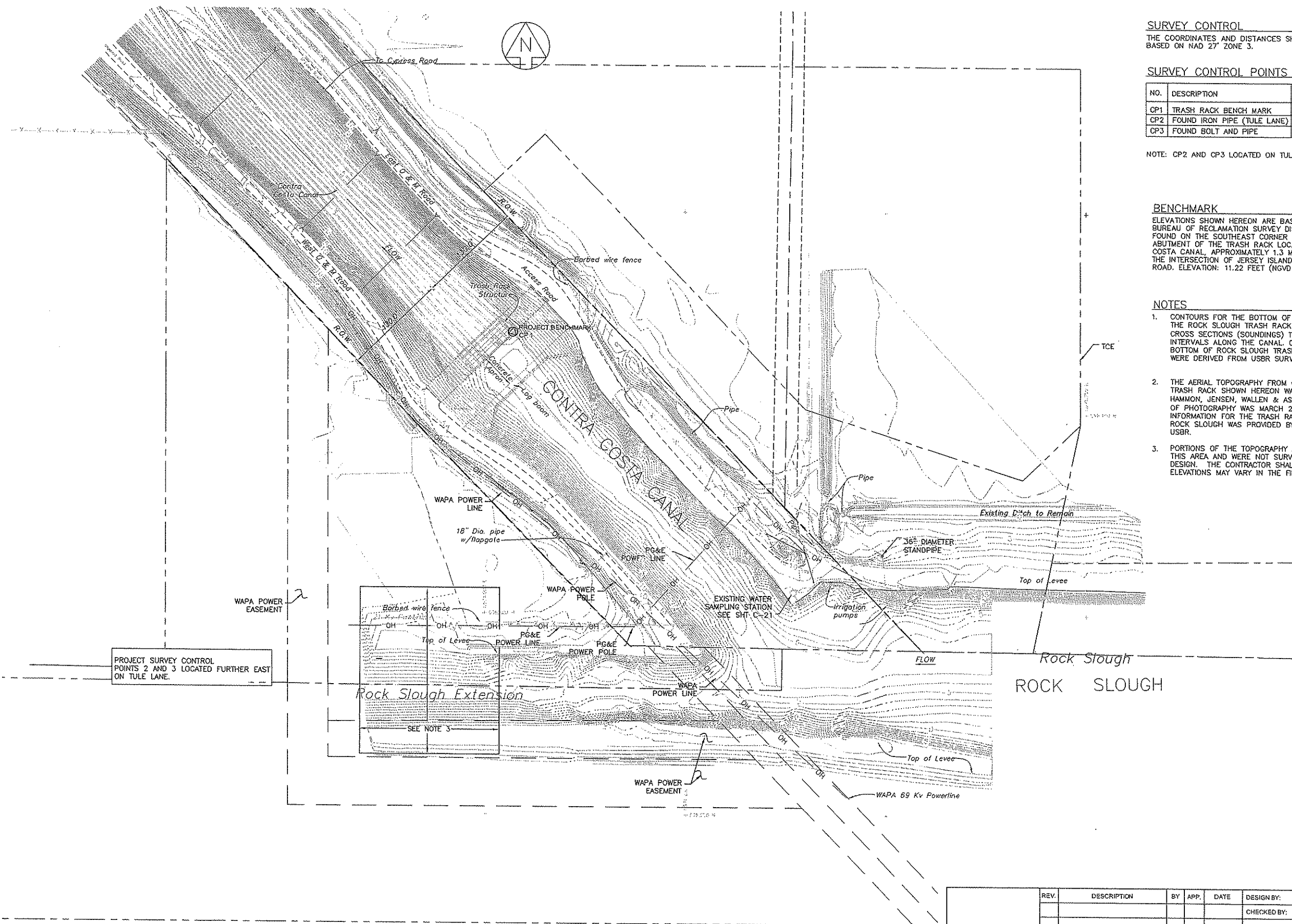
1. CONTRACTOR SHALL LIMIT ITS CONSTRUCTION ACTIVITIES TO WITHIN THE USBR ROW AND DESIGNATED TEMPORARY CONSTRUCTION EASEMENTS, SEE SPEC SECTION 01060. CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS ROADS AS NEEDED AND WITH THE APPROVAL OF THE CONSTRUCTION ADMINISTRATOR.
2. CONTRACTOR SHALL LOCATE ITS STAGING AREAS WITHIN THE TEMPORARY CONSTRUCTION EASEMENTS AND SHALL STORE AND PARK EQUIPMENT, MACHINERY, MATERIAL, AND VEHICLES WITHIN THE STAGING AREAS. SEE SPEC SECTION 01500.
3. TEMPORARY CONSTRUCTION EASEMENT EXTENDS 50' TO THE WEST OF EXISTING FENCE.
4. SEE SHEET G-4 FOR SITE ACCESS AND HAUL ROUTE INFORMATION AND SPEC SECTION 01500.
5. CLEAR AND GRUB ALL TEMPORARY CONSTRUCTION EASEMENTS AND PERMANENT AREAS PER SPEC SECTION 02111 AND AS SHOWN ON DRAWINGS C-2 AND C-3.
6. GATES SHALL BE PER DETAIL 7/C-22.
7. CONTRACTOR SHALL SECURE ACCESS GATE AT THIS LOCATION WITH A PADLOCK AT ALL TIMES EXCEPT WHEN IMMEDIATE ACCESS IS NECESSARY. GATE SHALL BE LOCKED AFTER EACH TRUCK MOVEMENT. SEE SPEC SECTION 01500.
8. CHAIN LINK FENCE SHALL EXTEND FROM DELTA ROAD TO EXISTING BARBED WIRE FENCE. CHAIN LINK FENCE SHALL BE PER CALTRANS STD SPEC SECTIONS 80-4.01 AND 80-4.02. FENCE INSTALLATION SHALL BE PER CALTRANS REVISED STANDARD PLAN RSP A85.
9. LOCATE FENCE AND GATE AS DIRECTED BY THE CONSTRUCTION ADMINISTRATOR.
10. CONTRACTOR SHALL PROVIDE A BERM OR OTHER POSITIVE MEANS TO PREVENT IRRIGATION RUNOFF FROM ENTERING TEMPORARY CONSTRUCTION EASEMENT.

BROWN AND CALDWELL

CONFORMED

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: F. BURKE			CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA							
						CHECKED BY: P. BELLOWS										
						DRAWN BY: F. BURKE										
						CHECKED BY: P. BELLOWS										
						PROJECT NO.: 109065	SCALE: 1" = 160'									
						CAL GRID:	ASSESSOR'S BOOK:									
DATE: 07/13/2009		0	ISSUED FOR BID			CAD FILE: D-X-FSPRI-G6		PLOT DATE: 9/23/2009 11:26 AM		SHEET 05A OF 28		DRAWING NO. D-13029A		CONSULTANT NO. G-6		REV. 0



## SURVEY CONTROL

THE COORDINATES AND DISTANCES SHOWN HEREON ARE BASED ON NAD 27 ZONE 3.

## SURVEY CONTROL POINTS

NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
CP1	TRASH RACK BENCH MARK	539849.927	1671035.587	11.22
CP2	FOUND IRON PIPE (TULE LANE)	539484.952	1669543.921	7.02
CP3	FOUND BOLT AND PIPE	539516.723	1667406.487	13.93

NOTE: CP2 AND CP3 LOCATED ON TULE LANE

## BENCHMARK

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOUND BUREAU OF RECLAMATION SURVEY DISK STAMPED "11.19" FOUND ON THE SOUTHEAST CORNER OF THE NORTHEAST ABUTMENT OF THE TRASH RACK LOCATED ON THE CONTRA COSTA CANAL, APPROXIMATELY 1.3 MILES SOUTHEAST OF THE INTERSECTION OF JERSEY ISLAND ROAD AND EAST CYPRESS ROAD. ELEVATION: 11.22 FEET (NGVD 29)

## NOTES

1. CONTOURS FOR THE BOTTOM OF CHANNEL NORTH OF THE ROCK SLOUGH TRASH RACK WERE DERIVED FROM CROSS SECTIONS (SOUNDINGS) TAKEN AT 200' INTERVALS ALONG THE CANAL. CONTOURS FOR THE BOTTOM OF ROCK SLOUGH TRASH RACK STRUCTURE WERE DERIVED FROM USBR SURVEY DATED 1994.
2. THE AERIAL TOPOGRAPHY FROM CYPRESS ROAD TO THE TRASH RACK SHOWN HEREON WAS PROVIDED BY HAMMON, JENSEN, WALLEN & ASSOCIATES, INC. (DATE OF PHOTOGRAPHY WAS MARCH 23, 2006.) AND INFORMATION FOR THE TRASH RACK TO AND INCLUDING ROCK SLOUGH WAS PROVIDED BY THE CCWD AND USBR.
3. PORTIONS OF THE TOPOGRAPHY ARE EXTRAPOLATED IN THIS AREA AND WERE NOT SURVEYED AS PART OF THE DESIGN. THE CONTRACTOR SHALL BE AWARE THAT ELEVATIONS MAY VARY IN THE FIELD.

PROJECT SURVEY CONTROL POINTS 2 AND 3 LOCATED FURTHER EAST ON TULE LANE.

Rock Slough Extension

SEE NOTE 3

BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"=60' SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	M. MAHER
					CHECKED BY:	P. BELLWS
					DRAWN BY:	F. BURKE
					CHECKED BY:	C. JOYCE
					PROJECT NO.:	109065
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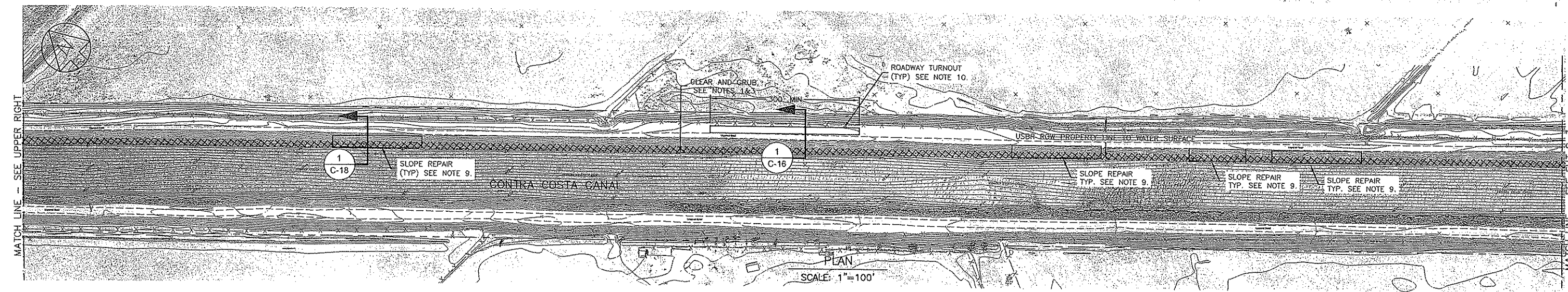


CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COTTERDAMS  
CONTRA COSTA CANAL, CVPJA, CA  
EXISTING SITE PLAN AND  
SURVEY CONTROL

SHEET	DRAWING	CONSULTANT	REV.
06	NO.	NO.	
OF 28	D-13030	C-1	1

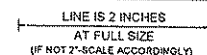





1. CLEAR AND GRUB ON WATER SIDE OF CANAL AND ROCK SLOUGH EMBANKMENT WHERE NEEDED FOR EMBANKMENT REPAIRS IN AREAS WITHIN THE TCA IN ACCORDANCE WITH SECTION 02111, SEE NOTE 1 AND 9.
2. CONTRACTOR SHALL ALLOW VEHICULAR TRAFFIC ALONG ACCESS ROAD FOR CCWD, R0799 AND USBR STAFF.
3. NOT USED
4. NOT USED.
5. MAINTAIN SECURITY OF CANAL AND WORK AREA AT ALL TIMES DURING CONSTRUCTION. KEEP GATES LOCKED BEFORE AND AFTER EACH TRUCK OR VEHICLE MOVEMENT TO MAINTAIN SITE SECURITY AND TO ENSURE NO LIVESTOCK CAN ENTER THE WORK AREA AND ESCAPE. NO REMOVAL OR TEMPORARY RELOCATION OF USBR FENCE UNLESS IT IS APPROVED BY CONSTRUCTION ADMINISTRATOR.
6. SEE SHEETS G-1 AND G-4 FOR ACCESS AND HAUL ROUTES.
7. CONTRACTOR SHALL CLEAR AND GRUB TO LIMITS SHOWN ON SHEET C-2 AND C-3.
8. CONTRACTOR SHALL REPAIR AND WIDEN ACCESS ROADS AS NEEDED WITHIN EXISTING R-O-W WHILE PROTECTING DESIGNATED WETLAND AREAS TO PROVIDE ACCESS TO AND FROM WORK SITE.
9. AREAS DESIGNATED AS SLOPE REPAIR ARE FOR BID PURPOSES ONLY AND CONTRACTOR SHALL ASSUME 3,000 FT OF CANAL OR SLOUGH EMBANKMENT SLOPE REPAIR AT MULTIPLE LOCATIONS. CONTRACTOR SHALL INVESTIGATE EXISTING CANAL EMBANKMENT PRIOR TO ROAD REPAIR TO ROAD REPAIR WORK AND REMOVAL OF RIPRAP ALONG SLOUGH AND COMPLETE ALL NECESSARY SLOPE REPAIRS PER DETAIL 1/C-18 IN ORDER TO PREVENT EMBANKMENT FAILURE DURING THE PROJECT. CONTRACTOR SHALL PERFORM EMBANKMENT REPAIRS AS DIRECTED BY THE CONSTRUCTION ADMINISTRATOR AND AS SPECIFIED IN SPEC SECTION 01500.
10. CONTRACTOR SHALL WIDEN EXISTING CANAL ACCESS ROAD TO PROVIDE THREE (3) 300-FOOT LONG TURNOUTS FOR CONSTRUCTION VEHICLES BETWEEN CYPRESS ROAD AND THE ROCK SLOUGH TRASH RACK. CONTRACTOR MAY LENGTHEN EXISTING TURNOUTS TO 300 FEET PER DETAIL 1/C-16. TURNOUT SHALL BE WIDE ENOUGH TO ACCOMMODATE TWO WAY TRAFFIC FOR CONSTRUCTION VEHICLES. WIDEN EXISTING ROADWAY PER DETAIL 1/C-16. ROADWAY WIDENING SHALL NOT EXTEND INTO EXISTING WETLAND AREAS SHOWN ON SHEET C-4.

B R O W N   A N D  
C A L D W E L L

CONFORMED



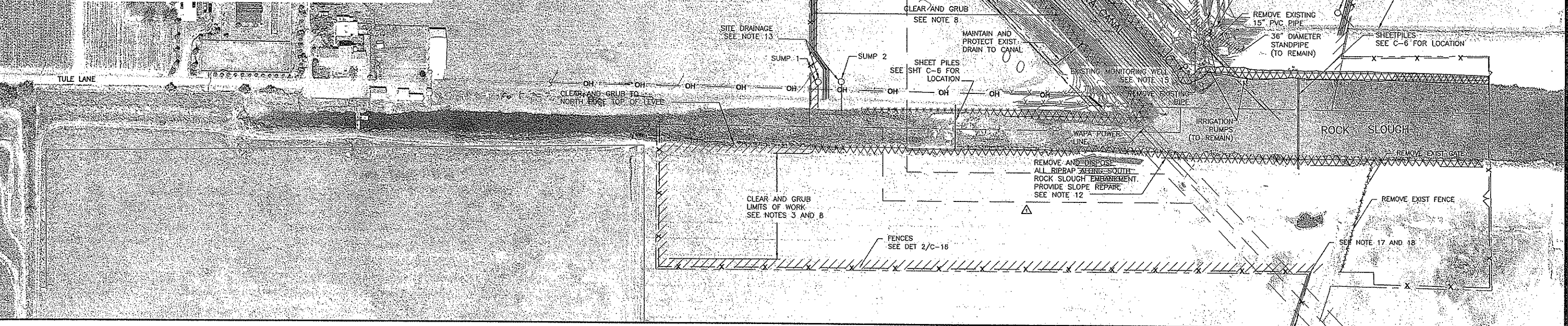
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						PROJECT NO.	SCALE:					
						109065	1" = 100'					
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DATE: 07/13/2009	0	ISSUED FOR BID				CAD FILE: DX-FSPH1-C2	PLOT DATE: 8/2/2009 11:17 AM		SHEET 07 OF 28	DRAWING NO. D-13031	CONSULTANT NO. C-2	REV 1





## NOTES:

1. CLEAR AND GRUB ON WATER SIDE OF CANAL EMBANKMENT IN AREAS SHOWN IN ACCORDANCE WITH SECTION 02111.
2. CONTRACTOR SHALL COORDINATE VEHICULAR TRAFFIC ALONG ACCESS ROAD PER SPEC SECTION 01500.
3. NOT USED
4. RIPRAP MATERIAL REMOVED AS PART OF CLEAR AND GRUB MAY BE USED AS SUPPORT FILL ON COFFERDAM SHEET PILES OR REMOVED FROM SITE. ALL RIPRAP/RUBBLE ON SOUTH ROCK SLOUGH EMBANKMENT SHALL BE REMOVED FROM SITE. SEE PHOTO 3/C-23
5. WAPA POWER LINES HAVE A MINIMUM VERTICAL CLEARANCE OF APPROXIMATELY 35 FEET ABOVE GRADE. CONTRACTOR SHALL MAINTAIN MINIMUM HORIZONTAL AND VERTICAL CLEARANCE OF 15 FEET AS REQUIRED BY CAL OSHA.
6. MAINTAIN SECURITY OF CANAL AT ALL TIMES DURING CONSTRUCTION. KEEP GATES LOCKED. REMOVAL OR TEMPORARY RELOCATION OF USBR FENCE SHALL BE APPROVED BY CONSTRUCTION ADMINISTRATOR.
7. SEE SHEETS G-1 AND G-4 FOR ACCESS AND HAUL ROUTES.
8. CONTRACTOR SHALL CLEAR AND GRUB ALL TEMPORARY CONSTRUCTION EASEMENTS SHOWN ON SHEET C-3 WITHIN WORK AREA.
9. CONTRACTOR SHALL REPAIR ACCESS ROADS AS NEEDED TO PROVIDE ACCESS TO AND FROM WORK SITE. REPAIR ACCESS ROAD BERM AS NEEDED TO MAINTAIN SMOOTH DRIVING SURFACE AS SPECIFIED IN SECTION 01500.
10. CONTRACTOR SHALL CLEAR AND GRUB AND REMOVE ALL RIPRAP FROM EMBANKMENTS TO 200 FT BEYOND COFFER DAMS AS SHOWN, SEE SPECIFICATION SECTION 01010 FOR TIME CONSTRAINTS.
11. CONTRACTOR RESPONSIBLE FOR SITE DRAINAGE AFTER CLEAR AND GRUB COMPLETION. CONTRACTOR SHALL MAINTAIN ACCESS TO SITE THROUGHOUT CONSTRUCTION.
12. TYPICAL REPAIR OF EXISTING CANAL EMBANKMENT AND LEVEE PER DETAIL 1/C-18.
13. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE INLET AND PUMP SIZED TO DRAIN AREAS ISOLATED BY THE TEMPORARY BERMS AND NEW SETBACK LEVEES, SEE DET 3/C-19. CONTRACTOR SHALL GRADE SITE TO DRAIN TO LOCAL DRAINAGE INLET TO FACILITATE WORK.
14. CONTRACTOR SHALL PROTECT AND MAINTAIN SAFE CLEARANCES FROM PG&E AND WAPA POWER LINES.
15. ABANDON EXISTING MONITORING WELL PER SPEC SECTION 01060-1.2.2
16. CONTRACTOR SHALL WIDEN EXISTING CANAL ACCESS ROAD TO PROVIDE THREE (3) 300-FOOT LONG TURNOUT FOR CONSTRUCTION VEHICLES BETWEEN CYPRESS ROAD AND THE ROCK SLOUGH TRASH RACK. WHERE EXISTING TURNOUTS EXIST (APPROXIMATELY 75 FEET IN LENGTH), CONTRACTOR MAY LENGTHEN EXISTING TURNOUTS TO 300 FEET PER DETAIL 1/C-16. TURNOUT SHALL BE WIDE ENOUGH TO ACCOMMODATE TWO WAY TRAFFIC FOR CONSTRUCTION VEHICLES. WIDEN EXISTING ROADWAY PER DETAIL 1/C-16. ROADWAY WIDENING SHALL NOT EXTEND INTO EXISTING WETLAND AREAS SHOWN ON SHEET C-4.
17. CLEAR AND GRUB ACCESS EASEMENT TO DELTA ROAD.
18. SEE SHT G-6 FOR REQUIREMENTS FOR ACCESS ROAD TO DELTA ROAD.



PLAN

SCALE: 1"=100'

**BROWN AND  
CALDWELL**

**CONFORMED**

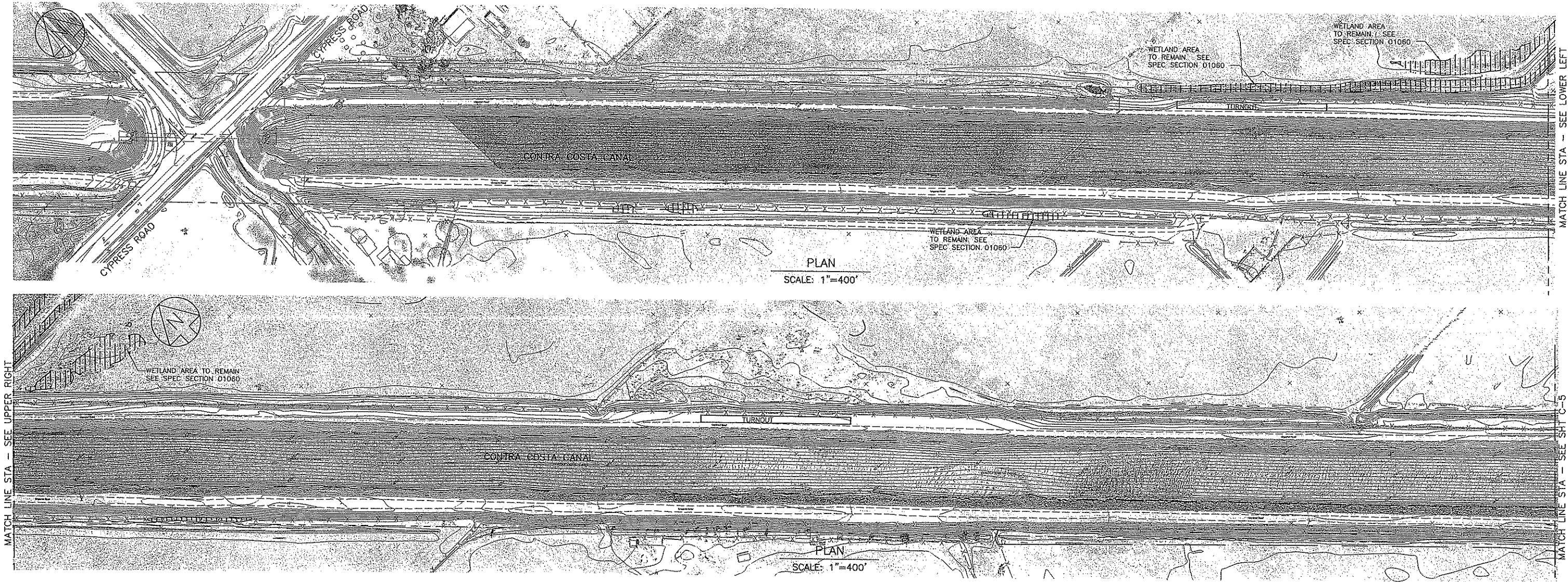
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AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

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					DRAWN BY	F. BURKE
					CHECKED BY	C. JOYCE
					PROJECT NO.	109065
					SCALE	AS SHOWN
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1	REVISED PER ADDENDUM 1	CJ	PB1	07-09	CAD FILE	0-3-2 SP11-03
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<b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA			
FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA CLEAR AND GRUB LIMITS - DEMO - ACCESS REPAIR (2 OF 2)			
SHEET 08 OF 28	DRAWING NO. D-13032	CONSULTANT NO. C-3	REV 2






- NOTES:
- 1. SEE SPEC SECTION 01010 FOR TIME CONSTRAINTS.
  - 2. SEE SPEC SECTION 01060 FOR ENVIRONMENTAL CONSTRAINTS.

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BROWN AND CALDWELL

CONFORMED

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

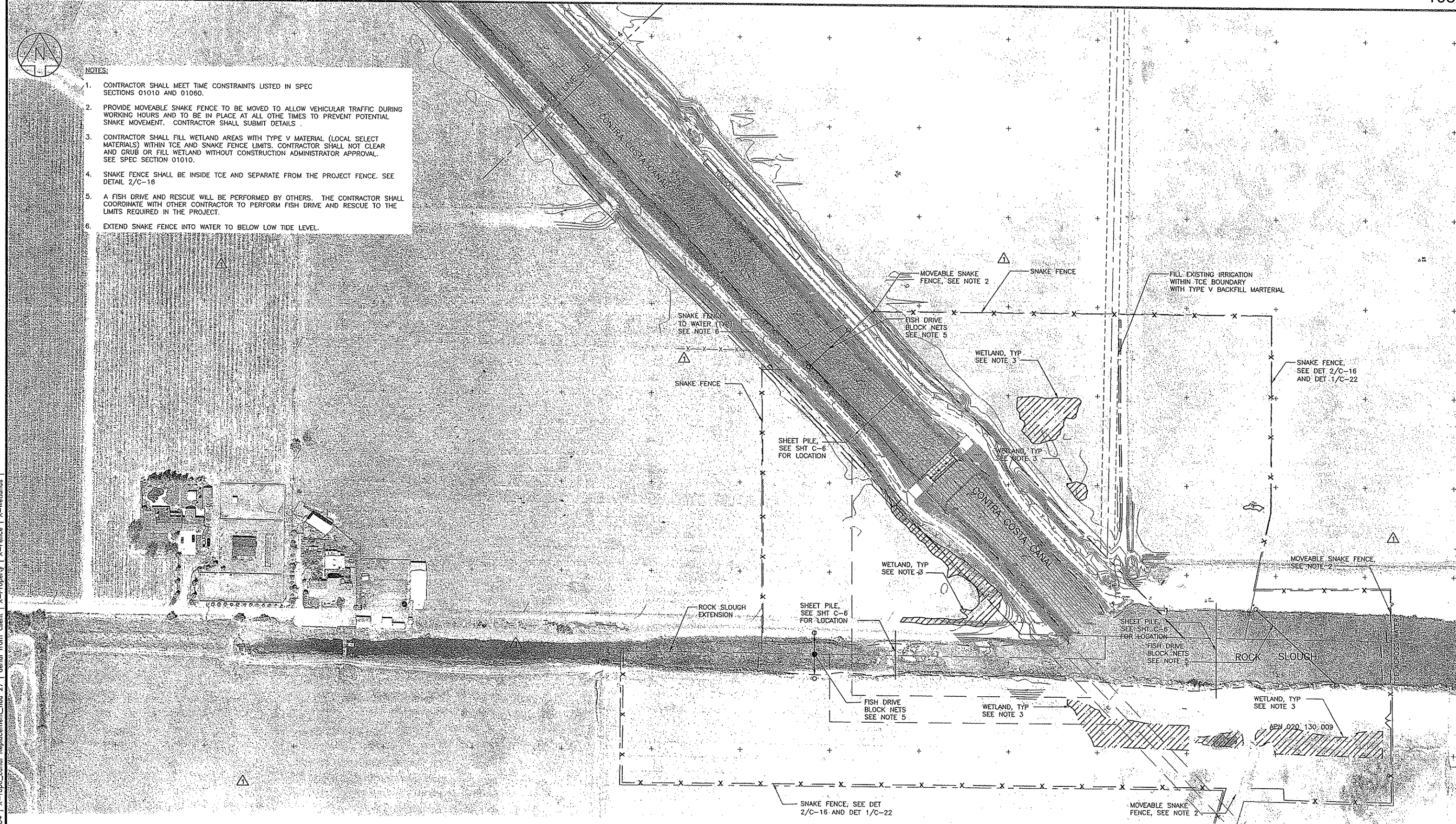
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DATE: 07/13/2009							ENVIRONMENTAL CONSTRAINTS (1 OF 2)
SHEET 09 OF 28		DRAWING NO. D-13033		CONSULTANT NO. C-4		REV. 1	





NOTES:

1. CONTRACTOR SHALL MEET TIME CONSTRAINTS LISTED IN SPEC SECTIONS 01010 AND 01060.
2. PROVIDE MOVEABLE SNAKE FENCE TO BE MOVED TO ALLOW VEHICULAR TRAFFIC DURING WORKING HOURS AND TO BE IN PLACE AT ALL OTHER TIMES TO PREVENT POTENTIAL SNAKE MOVEMENT. CONTRACTOR SHALL SUBMIT DETAILS.
3. CONTRACTOR SHALL FILL WETLAND AREAS WITH TYPE V MATERIAL (LOCAL SELECT MATERIALS) WITHIN TCE AND SNAKE FENCE LIMITS. CONTRACTOR SHALL NOT CLEAR AND GRUB OR FILL WETLAND WITHOUT CONSTRUCTION ADMINISTRATOR APPROVAL. SEE SPEC SECTION 01010.
4. SNAKE FENCE SHALL BE INSIDE TCE AND SEPARATE FROM THE PROJECT FENCE. SEE DETAIL 2/C-16.
5. A FISH DRIVE AND RESCUE WILL BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTOR TO PERFORM FISH DRIVE AND RESCUE TO THE LIMITS REQUIRED IN THE PROJECT.
6. EXTEND SNAKE FENCE INTO WATER TO BELOW LOW TIDE LEVEL.




PLAN  
SCALE: 1"=100'

BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

REV	DESCRIPTION	BY	APP	DATE	DESIGN BY: M. MAHER	CHECKED BY: P. BELLOWS	DRAWN BY: F. BURKE	CHECKED BY: C. JOYCE	PROJECT NO. 109065	SCALE AS SHOWN	CAL GRID	CAD FILE: D:\FSPH1-C5	PLOT DATE 9/23/2009 11:18 AM	ASSESSOR'S BOOK
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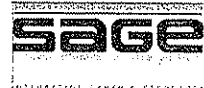
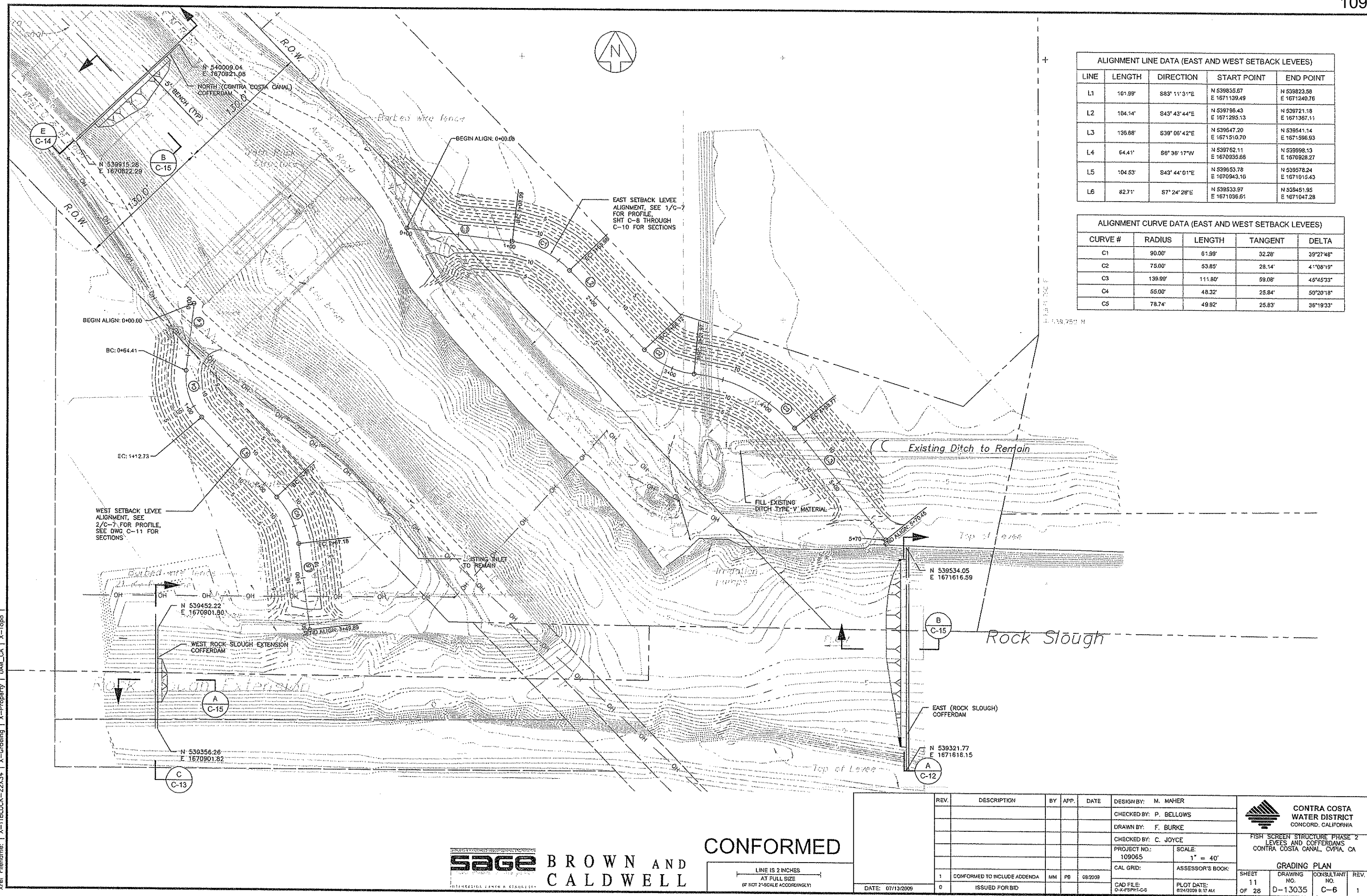
CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPIA, CA

ENVIRONMENTAL CONSTRAINTS (2 OF 2)

SHEET 10 OF 28	DRAWING NO. D-13034	CONSULTANT NO. C-5	REV. 2
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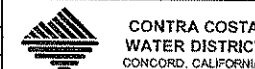


**BROWN AND CALDWELL**

**CONFORMED**

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

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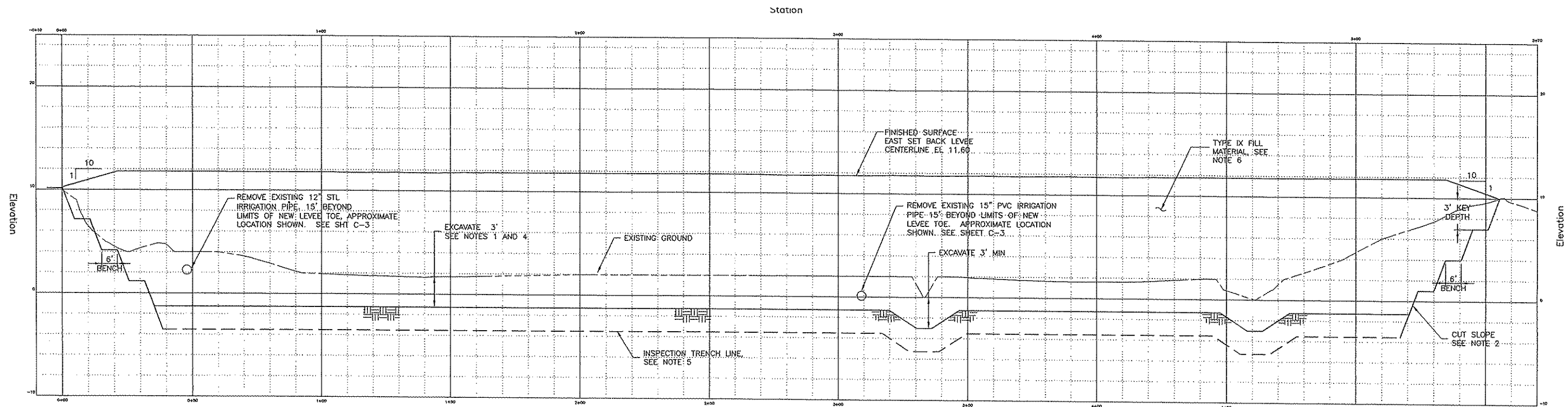
CONTRA COSTA WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVP/CA, CA

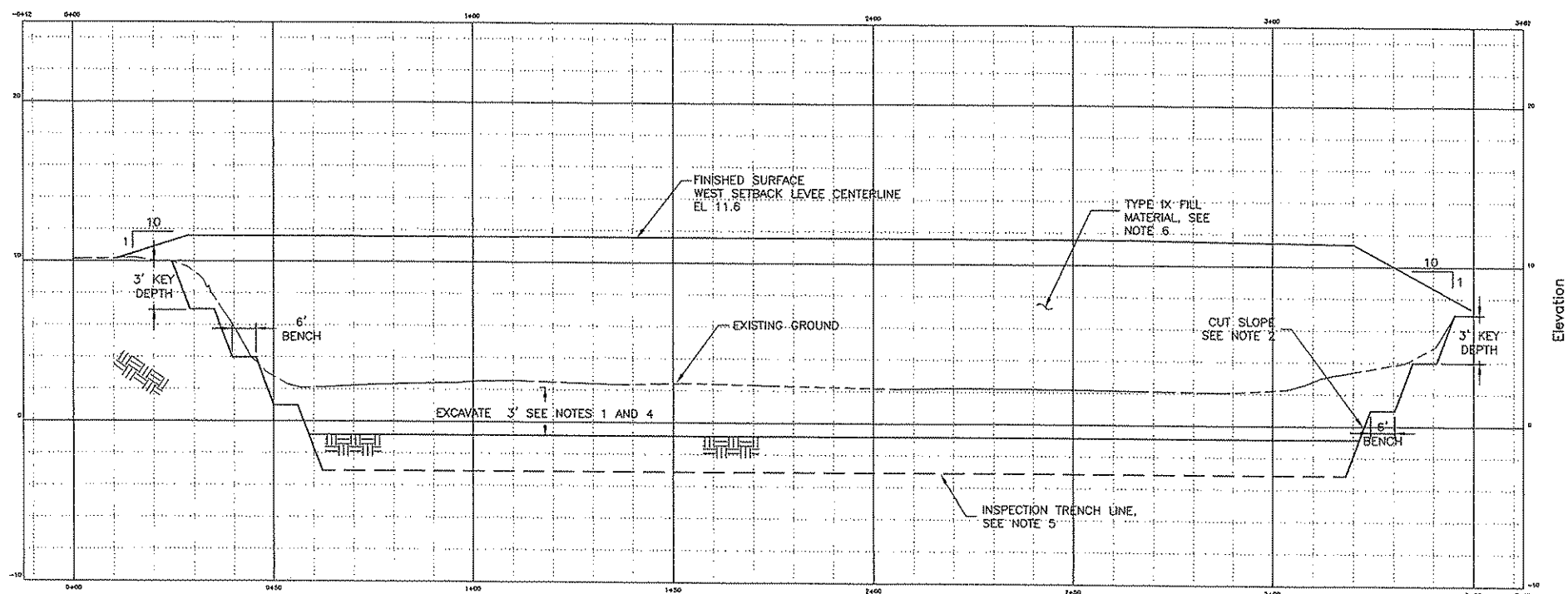
**GRADING PLAN**

SHEET	DRAWING NO.	CONSULTANT NO.	REV.
11 OF 28	D-13035	C-6	1





Station  
1  
C-6  
PROFILE - EAST SETBACK LEVEE  
SCALE 1" = 20' H  
1" = 5' V



Station  
2  
C-6  
PROFILE - WEST SETBACK LEVEE  
SCALE 1" = 20' H  
1" = 5' V

## NOTES:

1. REMOVE AND STOCKPILE TOP 18" OF MATERIAL IF REQUIRED BY TCE. REMOVE AND DISPOSE REMAINING 18" OF MATERIAL.
2. SIDE SLOPE SHALL BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS. SLOPE SHALL NOT EXCEED 1.5:1.
3. COMPACT FILL MATERIAL TO 95% RELATIVE COMPACTION, SEE SPEC SECTION 02220.
4. CONTRACTOR SHALL EXCAVATE 3' BELOW EXISTING GROUND (DEPTH PRIOR TO CLEAR AND GRUBBING). PRIOR TO SCARIFICATION, BASE OF EXCAVATION SHALL BE OBSERVED BY LEVEE DESIGN ENGINEER. UPON APPROVAL OF SUBGRADE BY LEVEE DESIGN ENGINEER, CONTRACTOR SHALL PREPARE AND LEVEL LEVEE FOUNDATION PRIOR TO CONSTRUCTION OF LEVEES AND PLACEMENT OF BACKFILL MATERIAL. SEE SPEC SECTION 02220 FOR FURTHER DETAIL.
5. SEE LEVEE CROSS SECTIONS SHEET FOR INSPECTION TRENCH GEOMETRY.
6. SEE SPEC SECTION 02220 FOR LIME TREATMENT REQUIREMENTS.

STANDARDS &amp; ASSOCIATES ENGINEERING

**SAGE**

INTEGRATING EARTH &amp; STRUCTURE

**BROWN AND****CALDWELL****CONFORMED**

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

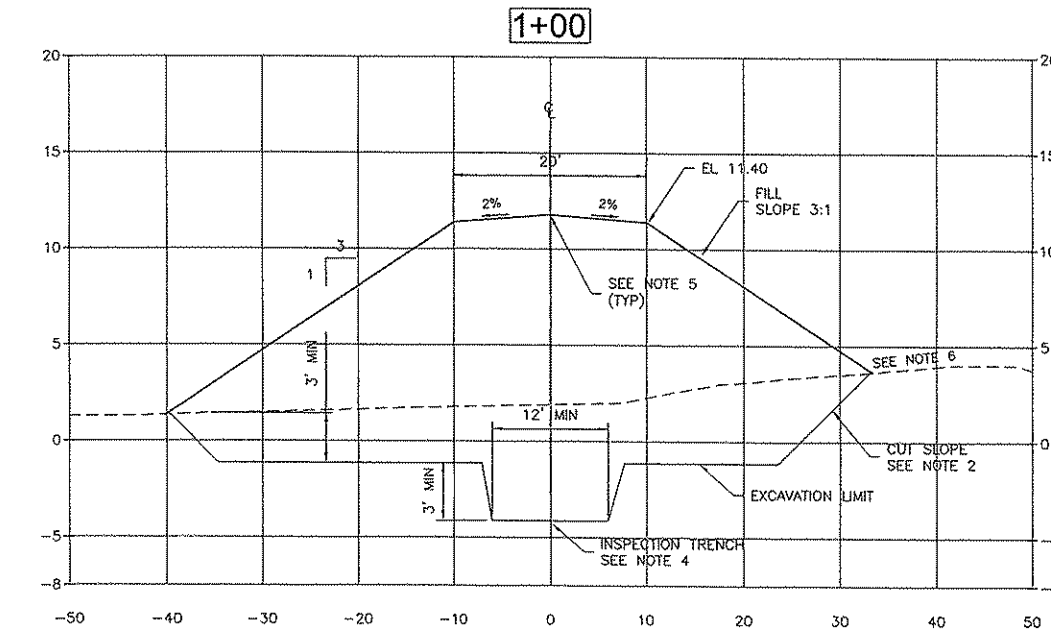
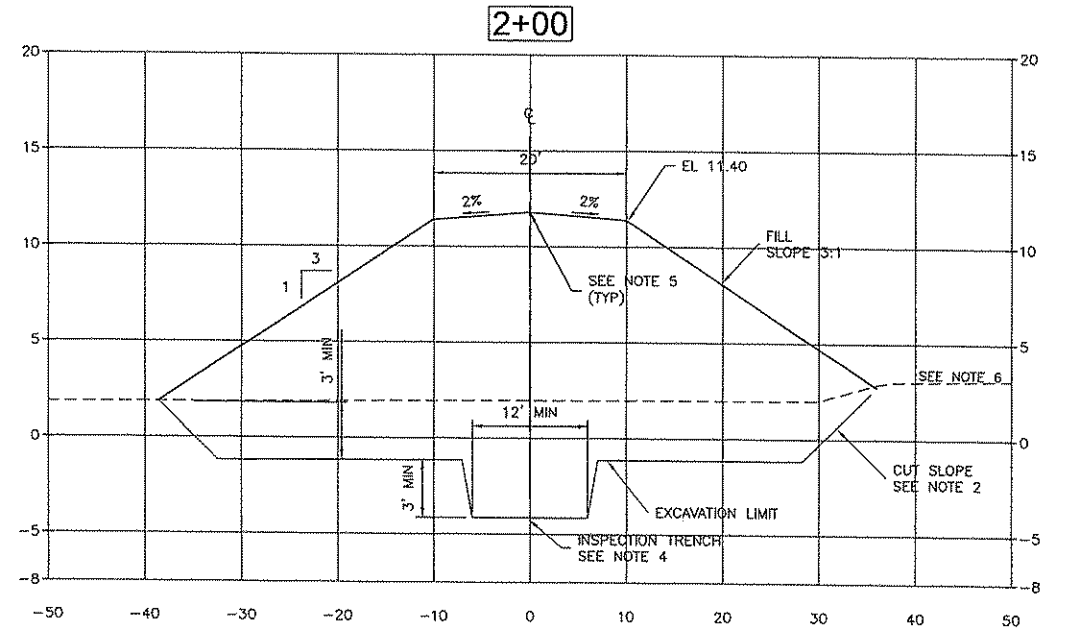
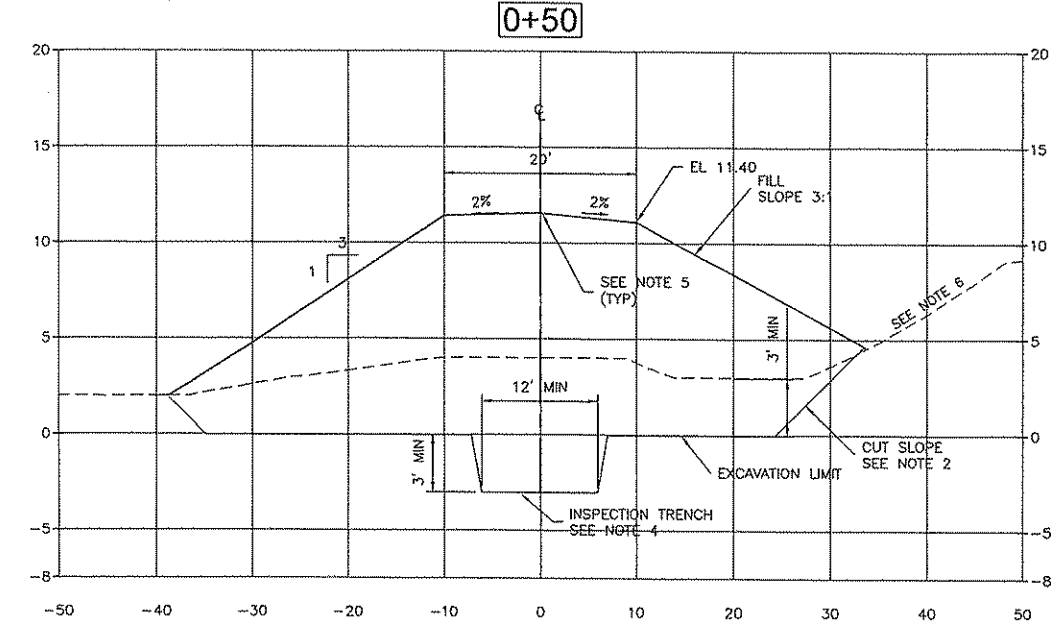
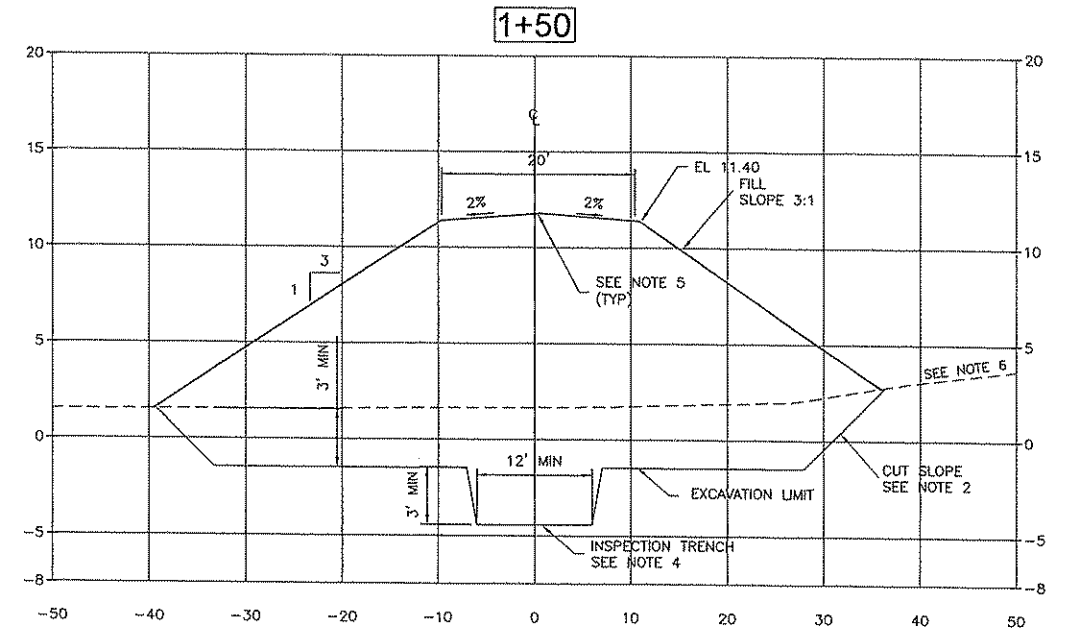
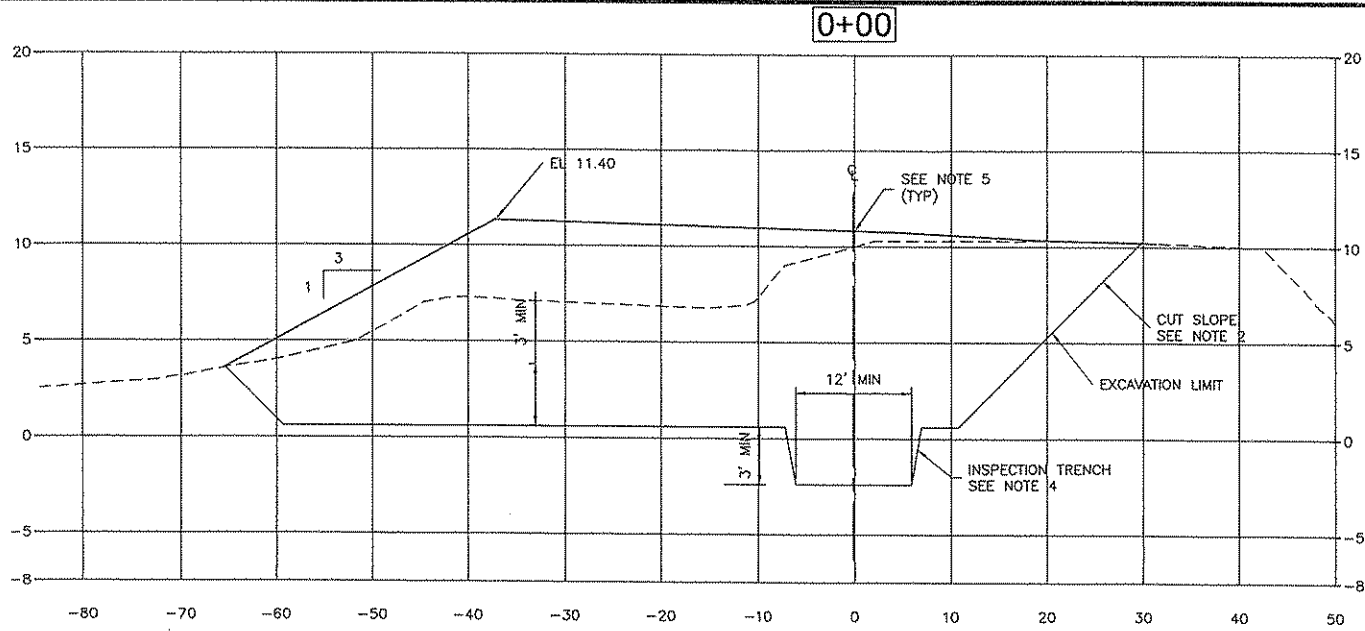
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CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVP/CA  
EAST AND WEST SETBACK LEVEE  
PROFILE

SHEET	DRAWING	CONSULTANT	REV.
12	NO.	NO.	
OF 28	D-13036	C-7	1



NOTES:


1. SEE SHEET G-5 FOR FENCING LIMITS
2. CUT SLOPE SHALL BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS. SLOPE SHALL NOT EXCEED 1.5:1.
3. FILL MATERIAL SHALL BE TYPE IX MATERIAL COMPACTED TO 95% RELATIVE COMPACTION, AND MAY REQUIRE LIME TREATMENT, SEE SPEC SECTION 02220.
4. AFTER INITIAL 3-FOOT EXCAVATION IS COMPLETE, AND PRIOR TO SCARIFICATION, EXPOSED LEVEE SUBGRADE SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER WORKING FOR THE OWNER. IF POTENTIAL SEEPAGE FEATURES (E.G., PIPES, SAND LENSES, ETC.) ARE OBSERVED, INSPECTION TRENCHES SHALL BE EXCAVATED LOCALLY TO EVALUATE AND REMOVE SEEPAGE FEATURES. INSPECTION TRENCH MAY EXTEND BELOW GROUNDWATER AND LOCAL DEWATERING SHOULD BE EXPECTED. SEE SPEC SECTION 02140.
5. CONTRACTOR SHALL PROVIDE ACCESS ROAD SURFACE ABOVE SETBACK LEVEE SURFACE. SEE DETAIL 5/C-16
6. GRADE LAND ADJACENT TO LEVEE TOE TO DRAIN AWAY FROM LEVEE FOR AT LEAST 20 FEET.

CONFORMED

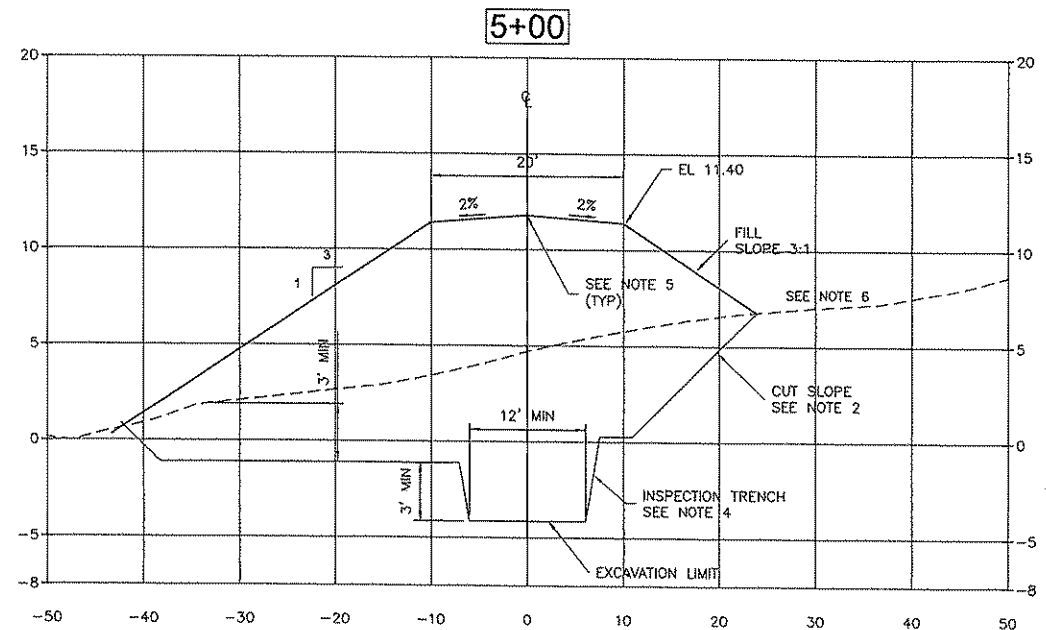
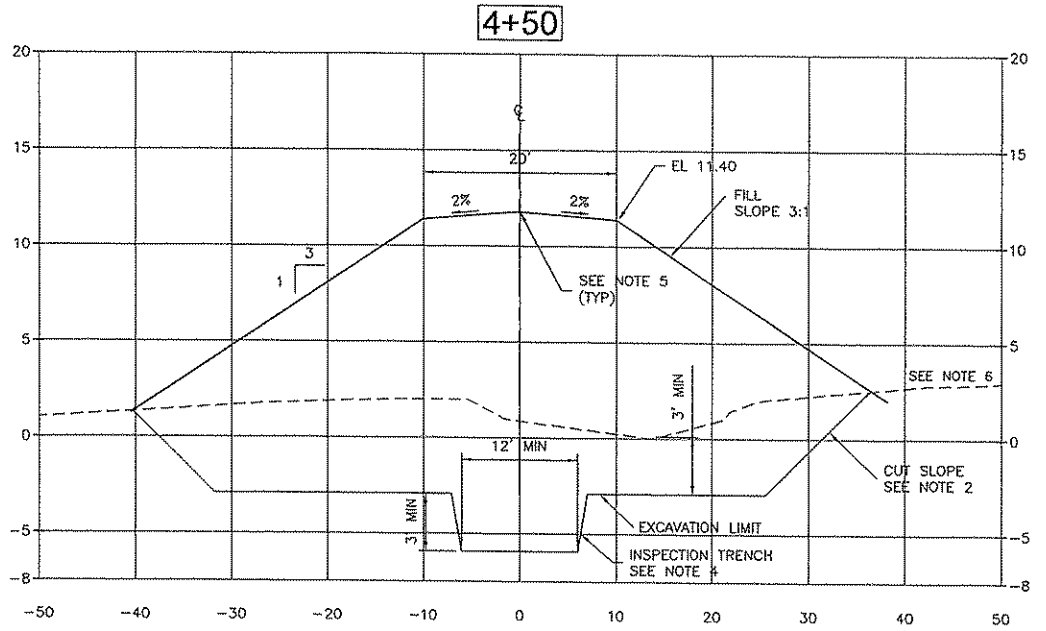
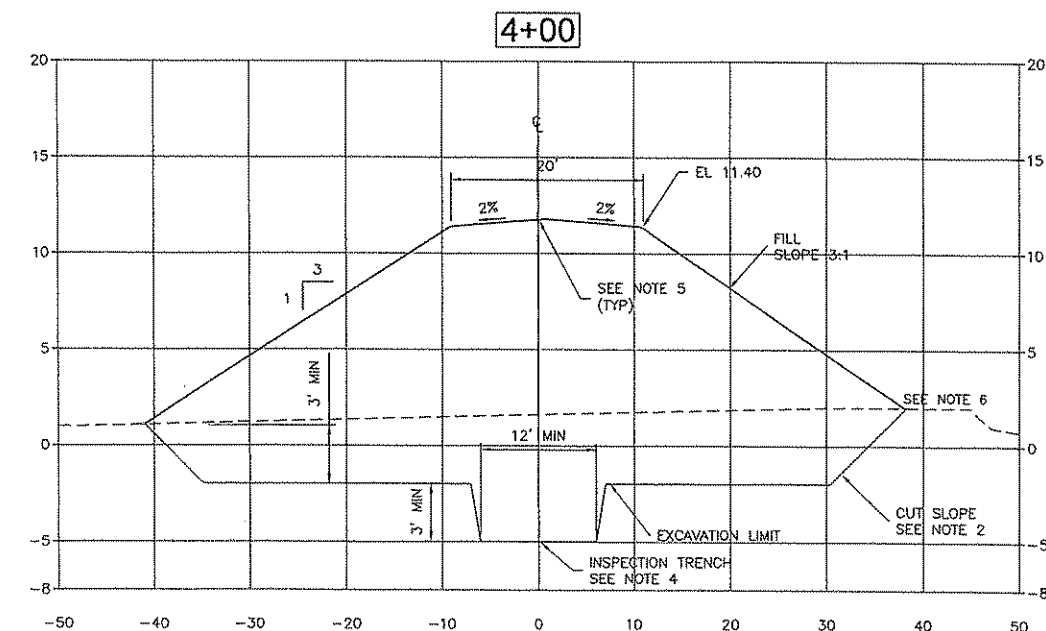
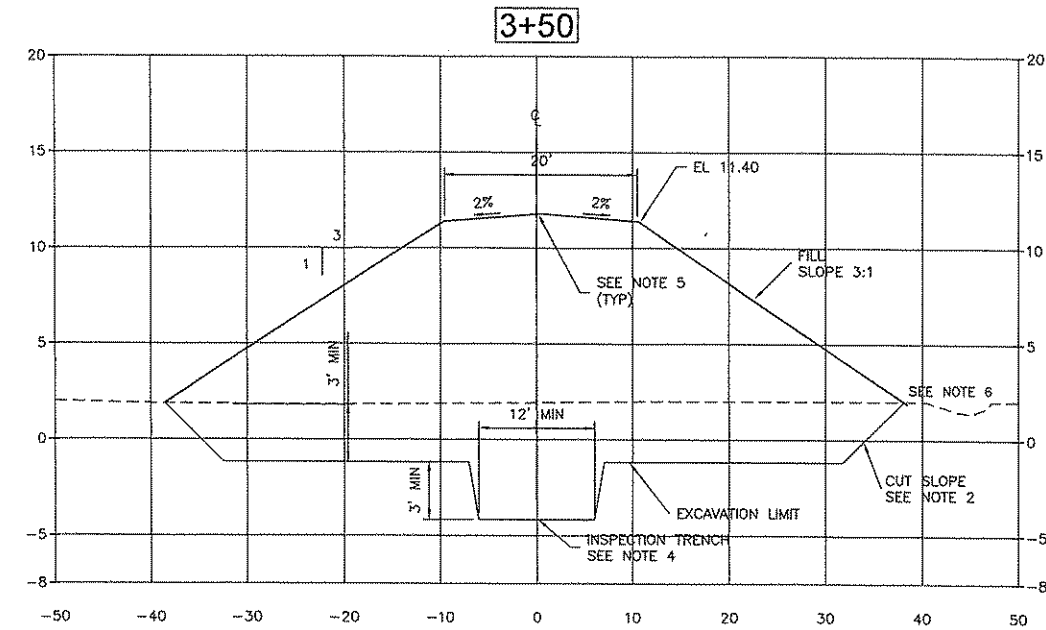
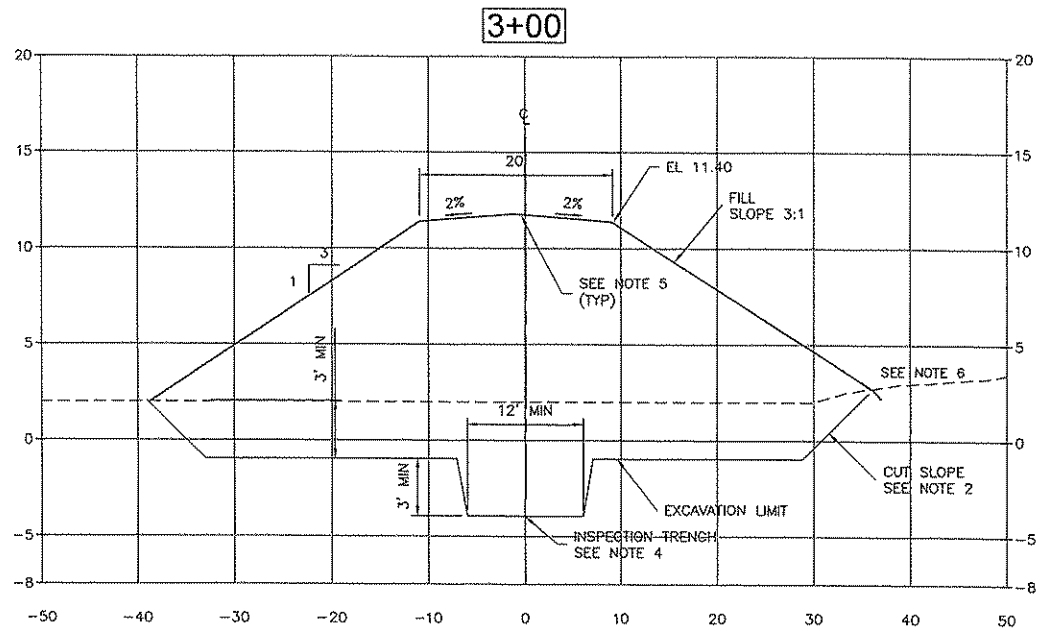
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AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

SAGE  
INTEGRATING EARTH & STRUCTURE

BROWN AND  
CALDWELL

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	D. MACK	 <b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA			
					CHECKED BY:	P. BELLWS				
					DRAWN BY:	F. BURKE	FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA			
					CHECKED BY:	C. JOYCE				
					PROJECT NO:	109065	EAST LEVEE SECTIONS (1 OF 3)			
					SCALE:	1" = 10' 1" = 5' V				
					CAL GRID:	ASSESSOR'S BOOK:	SHEET 13 OF 28 DRAWING NO. D-13037 CONSULTANT NO. C-8 REV. 1			
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	CAD FILE:	D:\X-FSPH-C-8				
0	ISSUED FOR BID				PLOT DATE:	9/23/2009 11:19 AM				






- NOTES:
1. SEE SHEET G-5 FOR FENCING LIMITS
  2. CUT SLOPE SHALL BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS. SLOPE SHALL NOT EXCEED 1.5:1.
  3. FILL MATERIAL SHALL BE TYPE IX MATERIAL COMPACTED TO 95% RELATIVE COMPACTION, AND MAY REQUIRE LIME TREATMENT, SEE SPEC SECTION 02220.
  4. AFTER INITIAL 3-FOOT EXCAVATION IS COMPLETE, AND PRIOR TO SCARIFICATION, EXPOSED LEVEE SUBGRADE SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER WORKING FOR THE OWNER. IF POTENTIAL SEEPAGE FEATURES (E.G., PIPES, SAND LENSES, ETC.) ARE OBSERVED, INSPECTION TRENCHES SHALL BE EXCAVATED LOCALLY TO EVALUATE AND REMOVE SEEPAGE FEATURES. INSPECTION TRENCH MAY EXTEND BELOW GROUNDWATER AND LOCAL DEWATERING SHOULD BE EXPECTED. SEE SPEC SECTION 02140.
  5. CONTRACTOR SHALL PROVIDE ACCESS ROAD SURFACE ABOVE SETBACK LEVEE SURFACE. SEE DETAIL 5/C-16
  6. GRADE LAND ADJACENT TO LEVEE TOE TO DRAIN AWAY FROM LEVEE FOR AT LEAST 20 FEET.

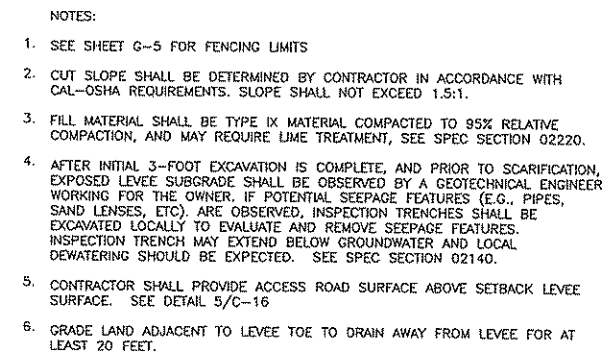


**BROWN AND CALDWELL**


**CONFORMED**

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"=SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	D. MACK	 <div>CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA</div>												
						CHECKED BY:	P. BELLWS													
						DRAWN BY:	F. BURKE													
						CHECKED BY:	C. JOYCE													
						PROJECT NO.:	109065													
						SCALE:	1" = 10'													
							1" = 5' V													
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DATE: 07/13/2009	0	ISSUED FOR BID						<table><tr><td>SHEET</td><td>DRAWING</td><td>CONSULTANT</td><td>REV.</td></tr><tr><td>14</td><td>NO.</td><td>NO.</td><td></td></tr><tr><td>OF 28</td><td>D-13038</td><td>C-9</td><td>1</td></tr></table>	SHEET	DRAWING	CONSULTANT	REV.	14	NO.	NO.		OF 28	D-13038	C-9	1
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14	NO.	NO.																		
OF 28	D-13038	C-9	1																	

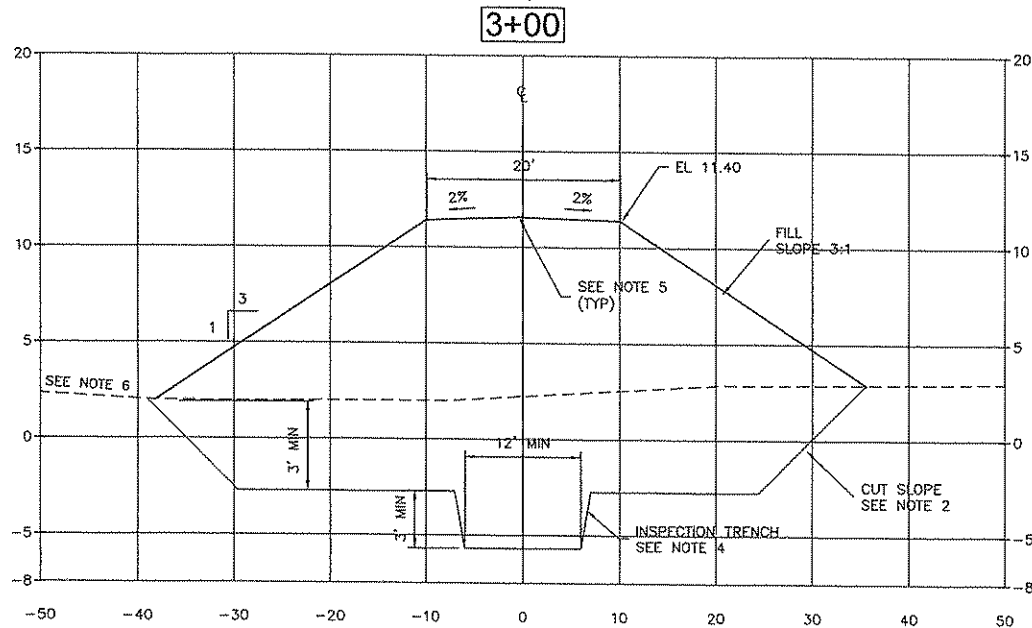
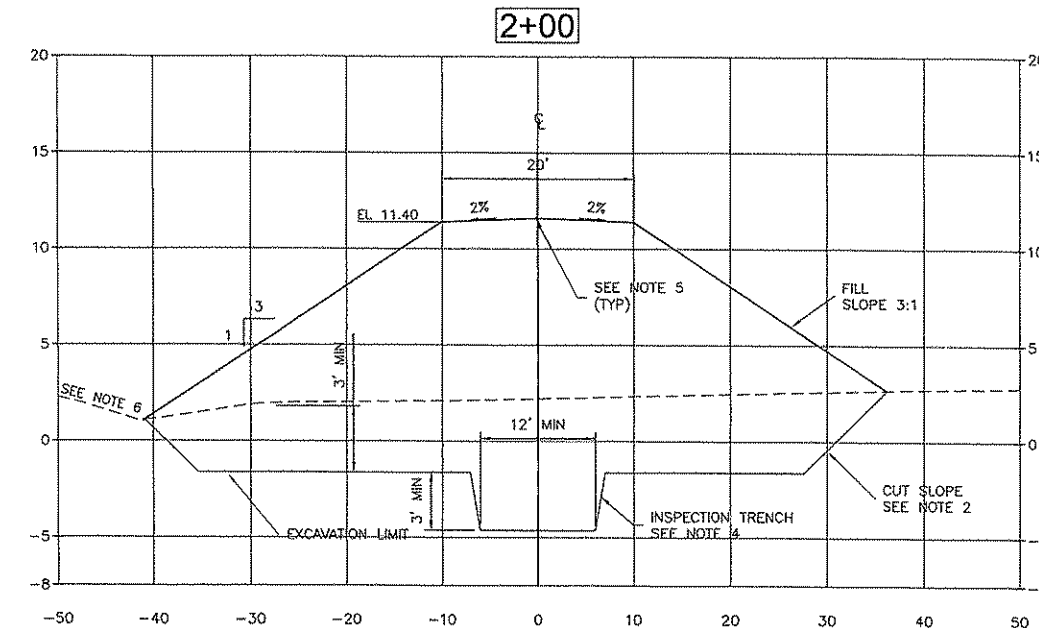
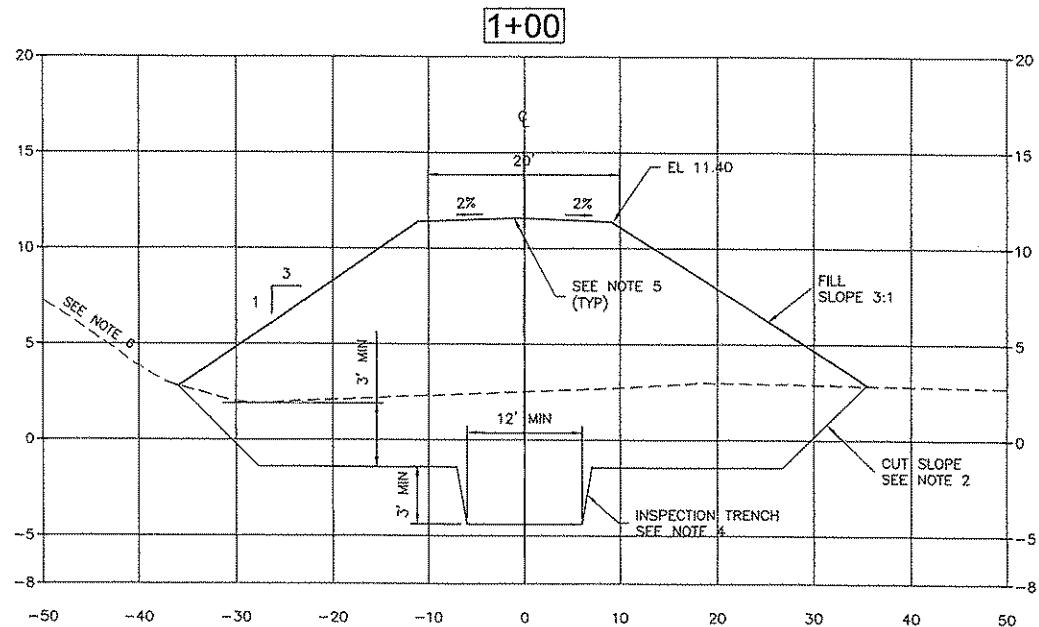
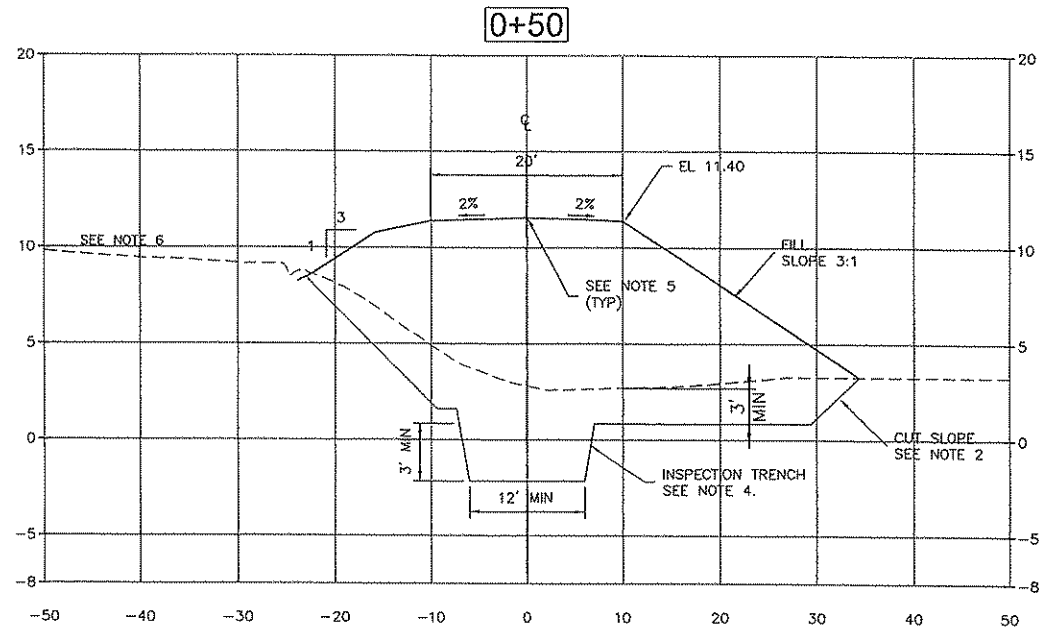


LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"-SCALE ACCORDINGLY)

DATE: 07/13/2009	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: D. MACK		 <b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA	FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPJA, CA	EAST LEVEE SECTIONS (3 OF 3)	SHEET 15 OF 28	DRAWING NO. D-13039	CONSULTANT NO. C-10	REV
						CHECKED BY: P. BELLOWS								
						DRAWN BY: F. BURKE								
						CHECKED BY: C. JOYCE								
						PROJECT NO.: 109065	SCALE: 1" = 10' 1" = 5' V							
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Xref File Name: T-X-TBLOCK-22X34 X-Sections and Profile | DAM\_CA




- NOTES:
1. SEE SHEET G-5 FOR FENCING LIMITS
  2. CUT SLOPE SHALL BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS. SLOPE SHALL NOT EXCEED 1.5:1.
  3. FILL MATERIAL SHALL BE TYPE IX MATERIAL COMPACTED TO 95% RELATIVE COMPACTION, AND MAY REQUIRE LIME TREATMENT, SEE SPEC SECTION 02220.
  4. AFTER INITIAL 3-FOOT EXCAVATION IS COMPLETE, AND PRIOR TO SCARIFICATION, EXPOSED LEEVEE SUBGRADE SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER WORKING FOR THE OWNER. IF POTENTIAL SEEPAGE FEATURES (E.G., PIPES, SAND LENSES, ETC.) ARE OBSERVED, INSPECTION TRENCHES SHALL BE EXCAVATED LOCALLY TO EVALUATE AND REMOVE SEEPAGE FEATURES. INSPECTION TRENCH MAY EXTEND BELOW GROUNDWATER AND LOCAL DEWATERING SHOULD BE EXPECTED. SEE SPEC SECTION 02140.
  5. CONTRACTOR SHALL PROVIDE ACCESS ROAD SURFACE ABOVE SETBACK LEEVEE SURFACE. SEE DETAIL 5/C-16
  6. GRADE LAND ADJACENT TO LEEVEE TOE TO DRAIN AWAY FROM LEEVEE FOR AT LEAST 20 FEET.

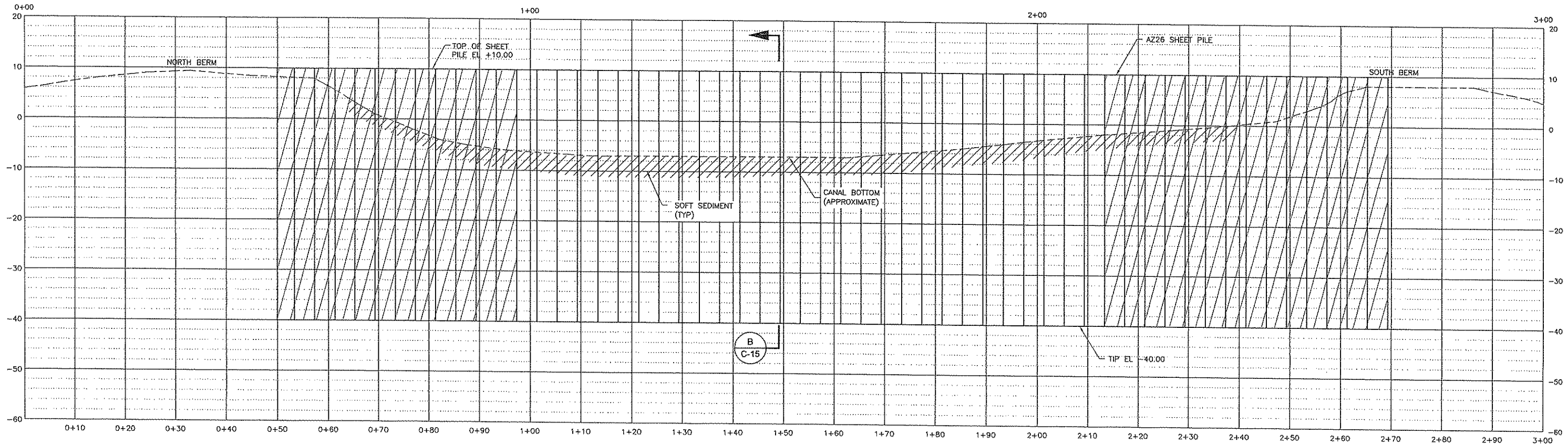


BROWN AND CALDWELL

CONFORMED

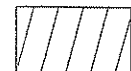
LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	D. MACK	 <div>CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA</div> <div>FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA</div> <div>WEST LEEVE SECTIONS (1 OF 1)</div>	
						CHECKED BY:	P. BELLWS		
						DRAWN BY:	F. BURKE		
						CHECKED BY:	C. JOYCE		
						PROJECT NO:	109065		SCALE: 1" = 10' 1" = 5' V
						CAL GRID:	ASSESSOR'S BOOK:		
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DATE: 07/13/2009									



**A**  
C-6  
**EAST (ROCK SLOUGH) COFFERDAM**  
SECTION  
SCALE 1" = 10' H  
1" = 10' V


NOTES:  
1. COFFERDAM SYSTEM DESIGN ASSUMES EAST COFFERDAM CLOSURE WITH WATER SURFACE AT EL +3 FT OR LOWER. SEE SPEC SECTION 02670 FOR PHASING REQUIREMENTS.

 DENOTES SHEET PILES TO BE CUT OFF AT MUD LINE AT COMPLETION OF PHASE 3 CONSTRUCTION (N.I.C.) THESE PILES SHALL NOT BE EXTRACTED



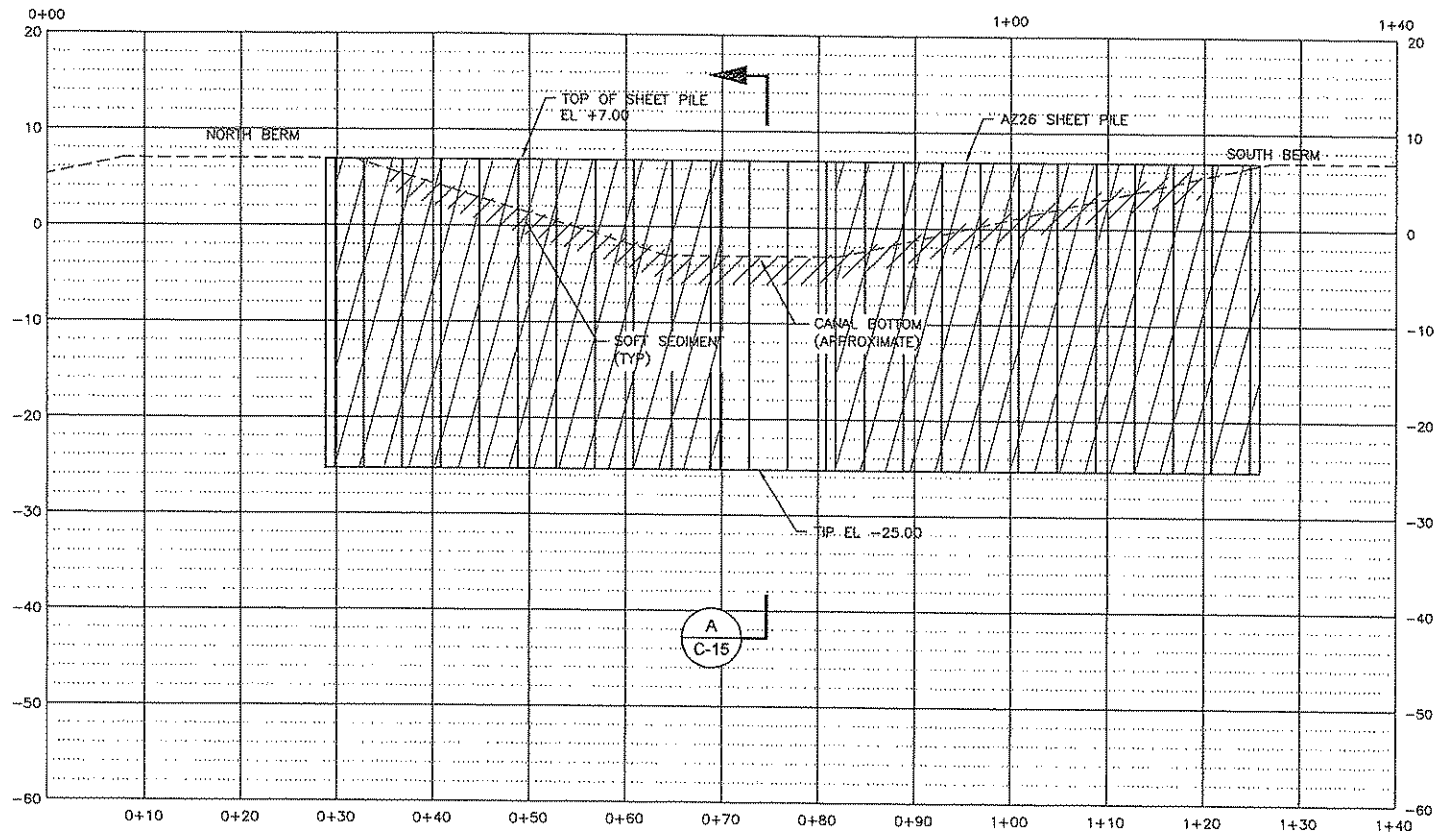
**CONFORMED**

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

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						CHECKED BY: W. MILLIHONE	
						DRAWN BY: BC	
						CHECKED BY: D. MACK	
						PROJECT NO.: 109065	
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DATE: 07/13/2009						SHEET 17 OF 28	DRAWING NO. 0-13041
						CONSULTANT NO. C-12	REV. 1



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C WEST (ROCK SLOUGH EXTENSION) COFFERDAM  
SECTION  
C-6  
SCALE 1" = 10' H  
1" = 10' V


NOTES:  
1. COFFERDAM DESIGN ASSUMES WATER SURFACE ELEVATION IS CONSTANT AT EL +3 FT OR LOWER BY THE COMPLETION OF THE EAST (ROCK SLOUGH) COFFERDAM. OTHER PHASING RESTRICTIONS APPLY. SEE SPEC SECTION 02670.

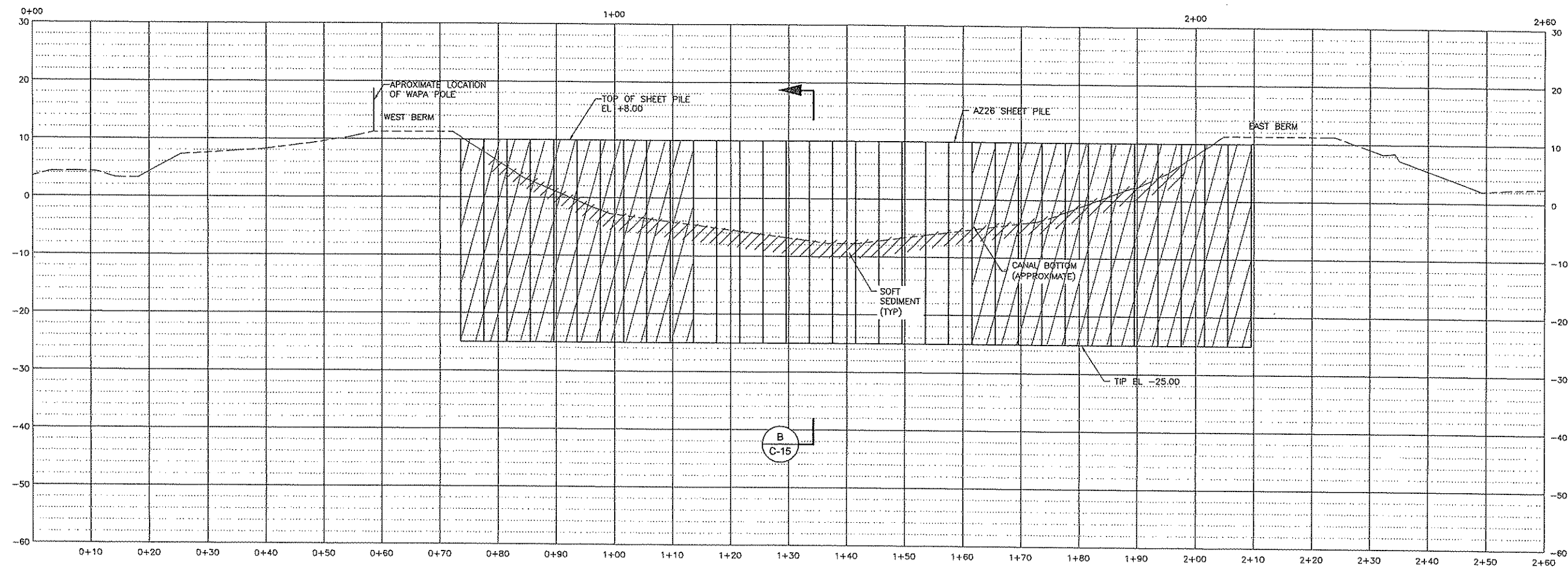
DENOTES SHEET PILES TO BE CUT OFF AT MUD LINE AT COMPLETION OF PHASE 3 CONSTRUCTION (N.I.C.) THESE PILES SHALL NOT BE EXTRACTED.



CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: S. UL HAQUE	 CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA
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						DRAWN BY: BC	
						CHECKED BY: D. MACK	
						PROJECT NO.: 109065	
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						ASSESSOR'S BOOK:	
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							CONSULTANT NO. C-13
							REV. 1



E  
C-6
**NORTH (CONTRA COSTA CANAL) COFFERDAM**  
 SECTION  
 SCALE 1" = 10' H  
 1" = 10' V

## NOTES:

1. COFFERDAM DESIGN ASSUMES WATER SURFACE ELEVATION IS CONSTANT AT EL. +3 FT OR LOWER BY THE COMPLETION OF THE EAST (ROCK SLOUGH) COFFERDAM. OTHER PHASING RESTRICTIONS APPLY. SEE SPEC SECTION 02670.





DENOTES SHEET PILES TO BE CUT OFF AT MUD LINE AT COMPLETION OF PHASE 3 CONSTRUCTION (N.I.C.) THESE PILES SHALL NOT BE EXTRACTED.

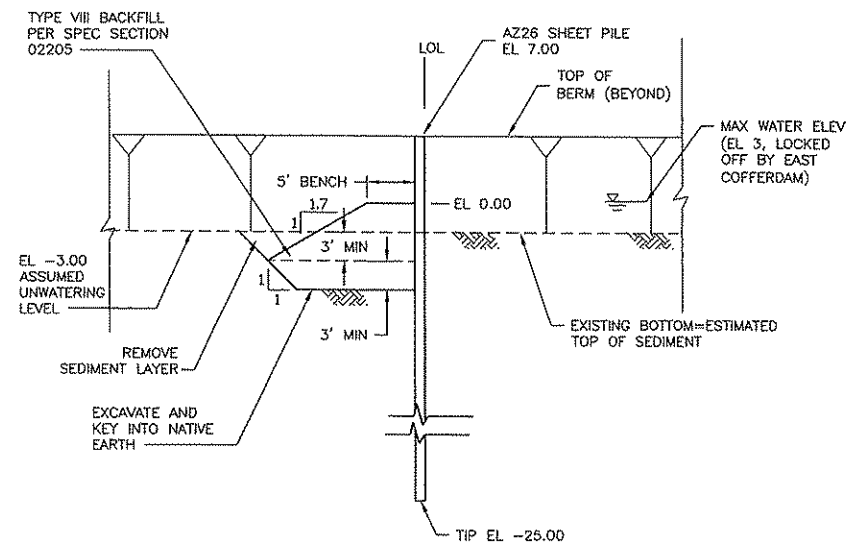


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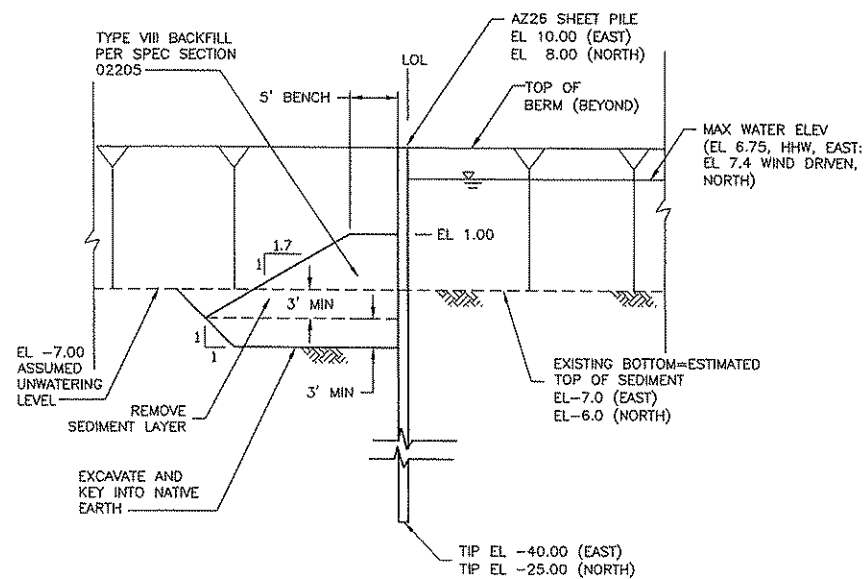
LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

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						DRAWN BY: BC						
						CHECKED BY: D. MACK						
						PROJECT NO.: 109065	SCALE: 1" = 10' H 1" = 10' V		<b>FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA NORTH (CONTRA COSTA CANAL) COFFERDAM SECTION</b>			
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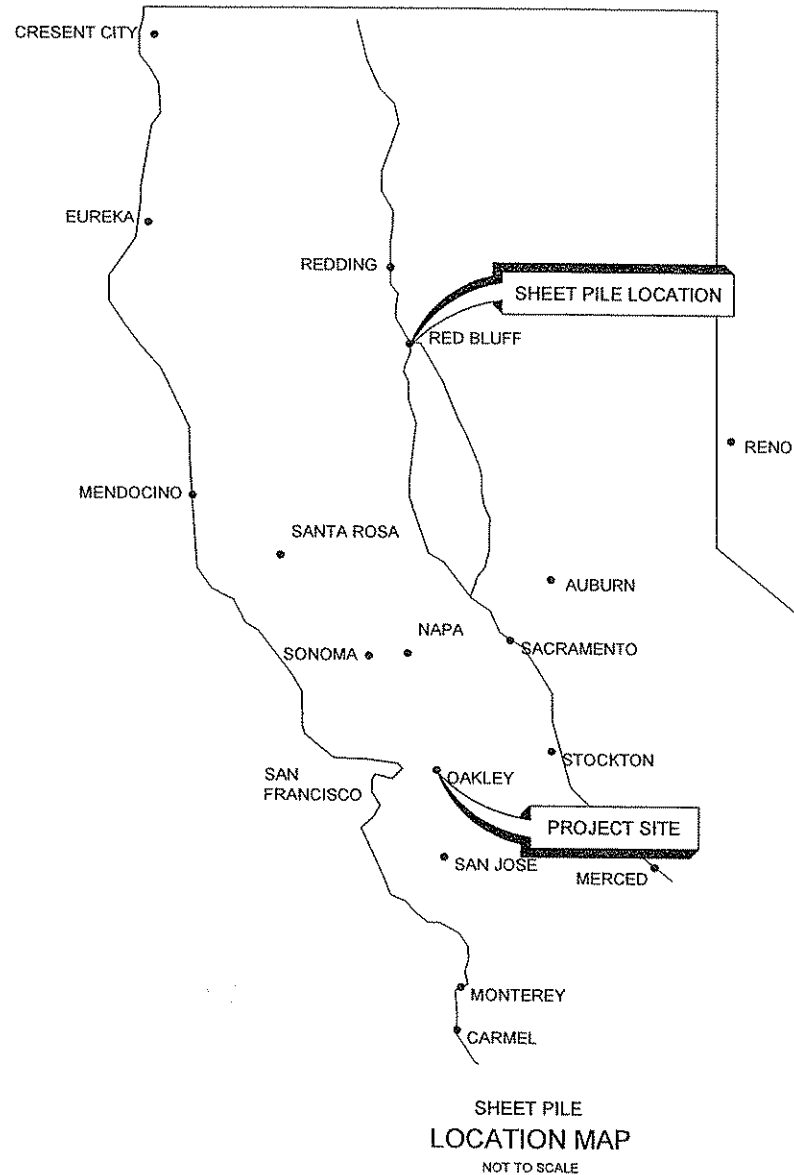




**A WEST COFFERDAM - SECTION**  
SCALE  
1" = 10'



**B EAST AND NORTH COFFERDAM - SECTION**  
SCALE  
1" = 10'



# 1 COFFERDAM NOTES:

- 1.1 IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND AVOID EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA. SEE SHEET G-3.
- 1.2 CONTRACTOR SHALL PROVIDE EQUIPMENT AND PERSONNEL ADEQUATE FOR COMPLETING WORK WITHIN SCHEDULE.
- 1.3 REMOVE (E) RIPRAP AS INDICATED. SEE SPEC SECTION 02670.

# 2 DESIGN NOTES:

- 2.1 DESIGN ULTIMATE SOIL PARAMETERS:

MATERIAL	ACTIVE PRESSURE (NON-SUBMERGED)	ACTIVE AND HYDROSTATIC PRESSURE (SUBMERGED)	PASSIVE PRESSURE (SUBMERGED)
SEDIMENT	N/A	82 PCF	0
CANAL SUBGRADE	30 PCF	82 PCF	180 PCF
CANAL BERM	51 PCF	86 PCF	180 PCF
ROCK FILL	20 PCF	74 PCF	160 PCF (SLOPING)

# 3 CONSTRUCTION NOTES:

- 3.1 SEE SPEC SECTION 02670 FOR COFFERDAM SPECIFICATIONS.
- 3.2 PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WORK PLAN DEPICTING PROPOSED COFFERDAM INSTALLATION METHODOLOGY, SEQUENCING, AND EQUIPMENT. SEE SPEC SECTIONS 01010, 02351, AND 02670.
- 3.3 DENSE SANDY SOILS MAY EXIST BELOW ELEVATION -16 FEET. THE CONTRACTOR SHOULD ANTICIPATE JETTING OR PREDRILLING SHEET PILES WHERE DIFFICULT PILE DRIVING OCCURS. SEE SPEC SECTION 02351 AND APPENDIX A (GEOTECHNICAL DATA REPORT) FOR MORE INFORMATION.
- 3.4 SEE SPEC SECTIONS 02351 AND 05100 FOR COFFERDAM SHEET PILE REQUIREMENTS. SHEET PILES SHALL HAVE A SECTION MODULUS OF AT LEAST 48.4 IN<sup>4</sup>/FT. AZ26 SHEET PILES WILL BE PROVIDED BY USBR (SEE SPEC SECTION 01010).
- 3.5 STRUCTURAL STEEL ELEMENTS SHALL BE DELIVERED AND MAINTAINED IN GOOD WORKING CONDITION, AND SHALL BE FREE OF DAMAGE, DEFORMATION, OR DEGRADATION DUE TO IMPACT, HEAT, CORROSION, AND ALL OTHER CHEMICAL OR PHYSICAL ATTACK. SEE SPEC SECTION 05100 FOR OTHER REQUIREMENTS.
- 3.6 ALL FABRICATION SHALL COMPLY WITH THE CURRENT AISC "MANUAL OF STEEL CONSTRUCTION."
- 3.7 NOT USED.
- 3.8 CONTRACTOR SHALL SURVEY TOPS OF INSTALLED SHEET PILES TO CONFIRM TOP AND TIP ELEVATIONS AND SHALL SUBMIT REPORT TO CONSTRUCTION ADMINISTRATOR PER SPEC SECTION 02351.
- 3.9 SHEET PILE INTERLOCKS SHALL BE SEALED WITH A NON-TOXIC INTERLOCK SEALANT. SEE SPECIFICATION SECTION 02351.
- 3.10 THE COFFERDAM SYSTEM IS INTENDED TO PROVIDE A "WATER-TIGHT" SEAL DURING UNWATERING. ALTHOUGH NUISANCE SEEPAGE IS ANTICIPATED, THE AS-CONSTRUCTED COFFERDAM SHOULD BE FREE OF SIGNIFICANT SEEPAGE AND LEAKS. INSTALLATION PRACTICES THAT DECREASE THE WATER-TIGHTNESS WILL NOT BE ACCEPTED.
- 3.11 THE EXISTING LEVEES ARE EXPECTED TO CONSIST OF LOOSE SAND AND MEDIUM STIFF CLAY THAT MAY NOT BE ABLE TO SUPPORT CONCENTRATED EQUIPMENT LOADS, SUCH AS OUTRIGGERS OR WHEEL LOADS. THE CONTRACTOR IS RESPONSIBLE FOR SURFICIAL STABILIZATION OF THE EXCAVATION CONSISTENT WITH THEIR MEANS AND METHODS OF CONSTRUCTION. THIS MAY INCLUDE THE USE OF DUNNAGE; TIMBER MATS; STEEL PLATES; GRAVEL AND FABRIC STABILIZATION PADS; OR OTHER MEASURES PROPOSED BY THE CONTRACTOR.
- 3.12 SHOP DRAWINGS SHALL BE SUBMITTED AS REQUIRED IN THE SPECIFICATIONS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT HE UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL, AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE ON A STAND ALONE SET OF DOCUMENTS. DUPLICATION OF DESIGN DOCUMENTS FOR THE PURPOSE OF SHOP DRAWINGS IS NOT ACCEPTABLE.

# 4 OBSERVATION AND MONITORING

- 4.1 PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN FOR MONITORING LEVEE CONDITIONS DURING SHEET PILE INSTALLATION. SEE SPEC SECTION 02351-3.2 FOR ADDITIONAL INFORMATION.



**CONFORMED**

LINE IS 2 INCHES  
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(IF NOT 2" SCALE ACCORDINGLY)

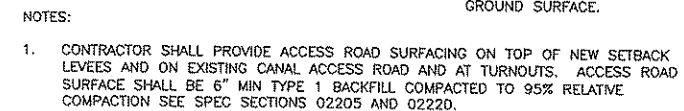
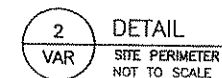
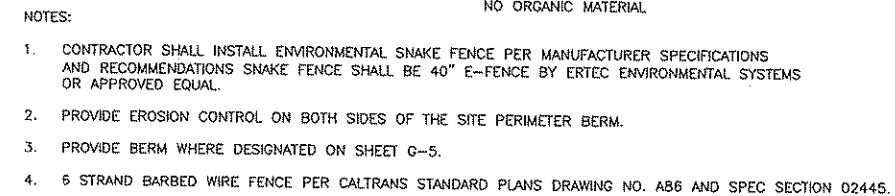
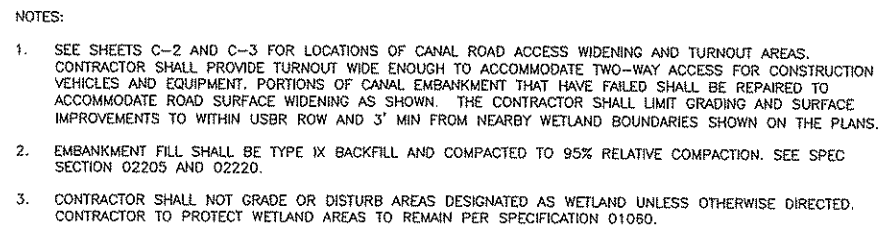
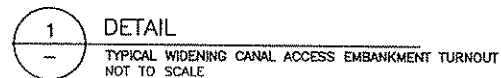
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0	ISSUED FOR BID													


**CONTRA COSTA WATER DISTRICT**  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPIA, CA

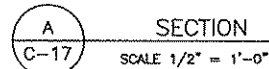
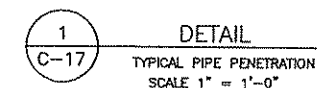
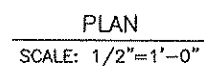
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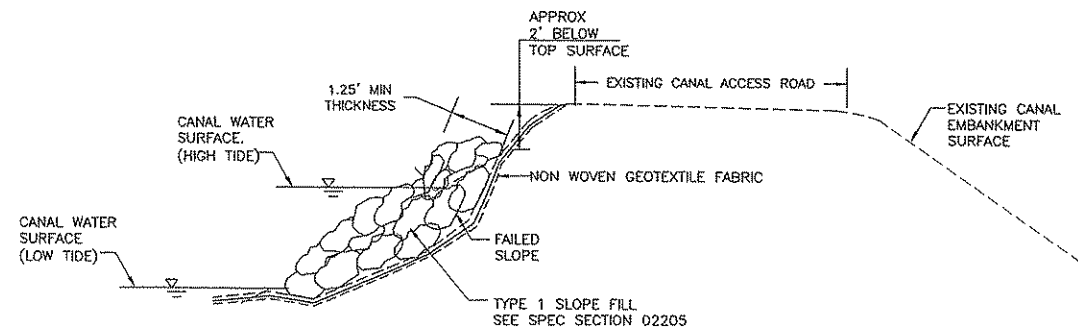
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						DRAWN BY: F. BURKE								
						CHECKED BY: C. JOYCE								
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B R O W N   A N D  
C A L D W E L L

DATE: 07/13/2009	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER		 <div>CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA</div>	<div>FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA CIVIL DETAILS 2 IRRIGATION STANDPIPE</div>	SHEET 22 OF 22	DRAWING NO. D-13046	CONSULTANT NO. C-17	REV.
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						DRAWN BY: F. BURKE							
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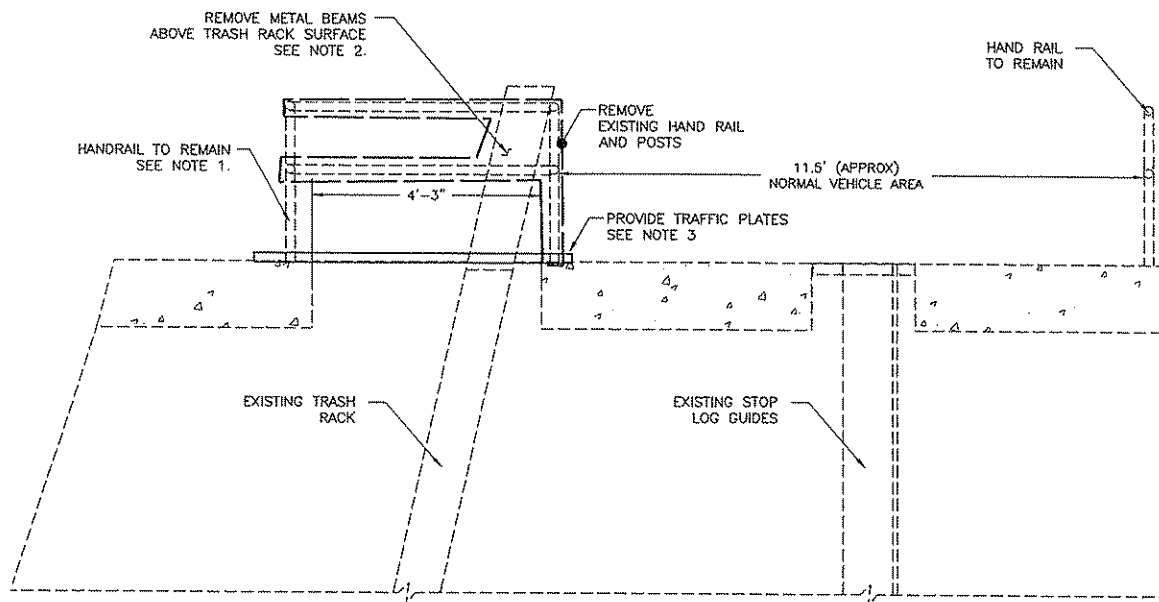
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NOTE:

1. SEE DRAWING C-2 AND C-3 FOR POTENTIAL AREAS REQUIRING SLOPE STABILIZATION ALONG CANAL ACCESS ROAD.
2. MAXIMUM SLOPE OF REPAIRED EMBANKMENT SHALL BE NO STEEPER THAN 2H:1V.

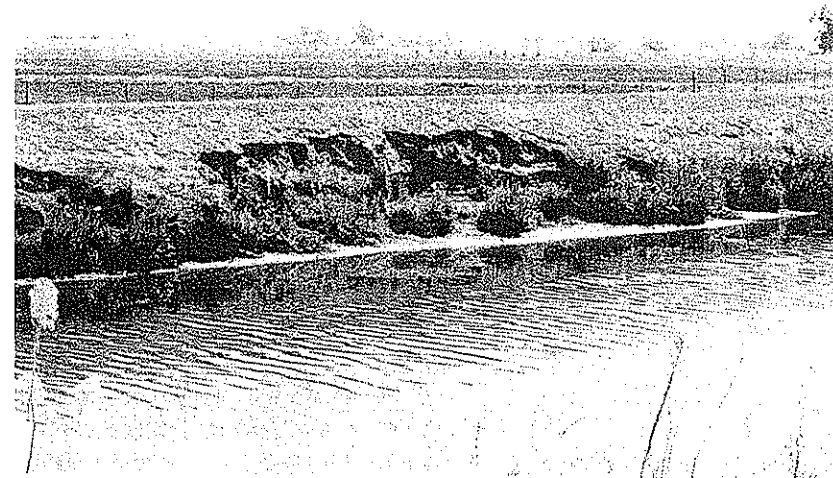
1  
DETAIL  
CANAL EMBANKMENT SLOPE REPAIR  
NOT TO SCALE



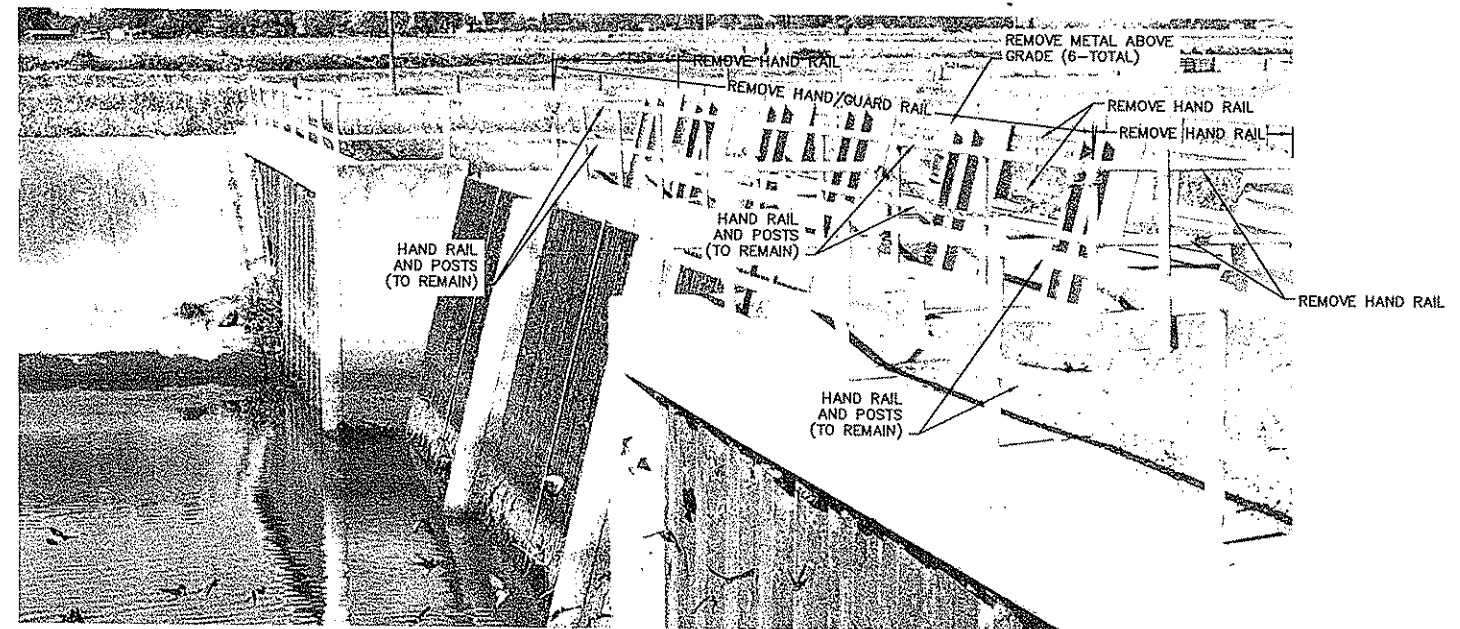
NOTE:

1. CONTRACTOR SHALL REMOVE PORTION OF HAND RAIL SURROUNDING EXISTING METAL BEAMS ABOVE ROCK SLOUGH TRASH RACK SURFACE.
2. REMOVE PORTION OF TRASH RACK STRUCTURE ABOVE CONCRETE SURFACE. CUT 3" BELOW CONCRETE SURFACE.
3. CONTRACTOR SHALL PROVIDE TRAFFIC PLATING TO ALLOW CONSTRUCTION VEHICLES TO TRAVEL OVER TRASH RACK. TRAFFIC PLATING SHALL BE RATED FOR H-20 LOAD AND SHALL BE LEFT IN PLACE AFTER CONSTRUCTION.
4. SEE PHOTO 2, THIS SHEET.
5. PHASE 3 : CONTRACTOR SHALL REPLACE HANDRAIL IN KIND AT ORIGINAL LOCATION AFTER CONSTRUCTION AND REMOVE TRAFFIC PLATINGS.
6. TRASH RACK CROSSING SHALL BE 1 LANE CROSSING WITH ONLY 1 VEHICLE ON THE TRASH RACK AT ANY TIME.

2  
DETAIL  
ROCK SLOUGH TRASH RACK DEMOLITION  
NOT TO SCALE



1  
PHOTO  
TYPICAL CANAL EMBANKMENT SLOPE FAILURE AT LOW TIDE  
NOT TO SCALE



2  
PHOTO  
TRASH RACK MODIFICATIONS TO ALLOW CONSTRUCTION TRUCK MOVEMENT  
NOT TO SCALE

BROWN AND CALDWELL

CONFORMED

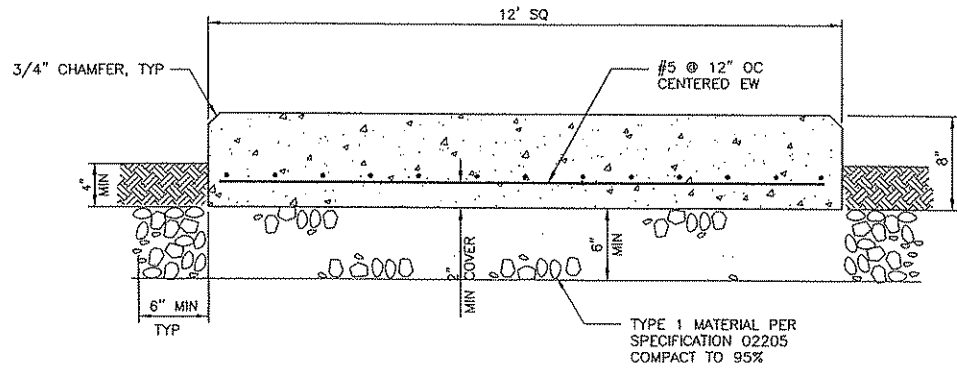
LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER	CHECKED BY: P. BELLWS	DRAWN BY: F. BURKE	CHECKED BY: C. JOYCE	PROJECT NO.: 109065	SCALE: AS SHOWN	CAL GRID:	ASSESSOR'S BOOK:	CAD FILE: D-X-FSPH1-C-18	PLOT DATE: 9/23/2009 11:22 AM	SHEET 23 OF 28	DRAWING NO. D-13047	CONSULTANT NO. C-18	REV. 1
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0	ISSUED FOR BID																	

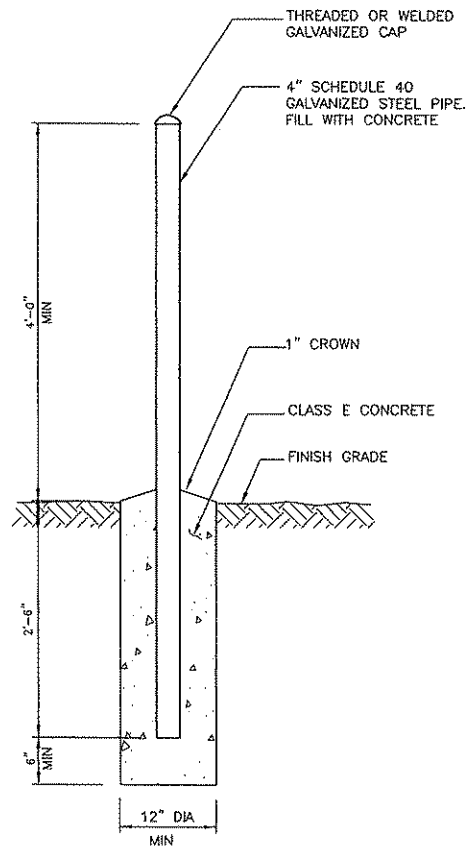
CONTRA COSTA WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPIA, CA

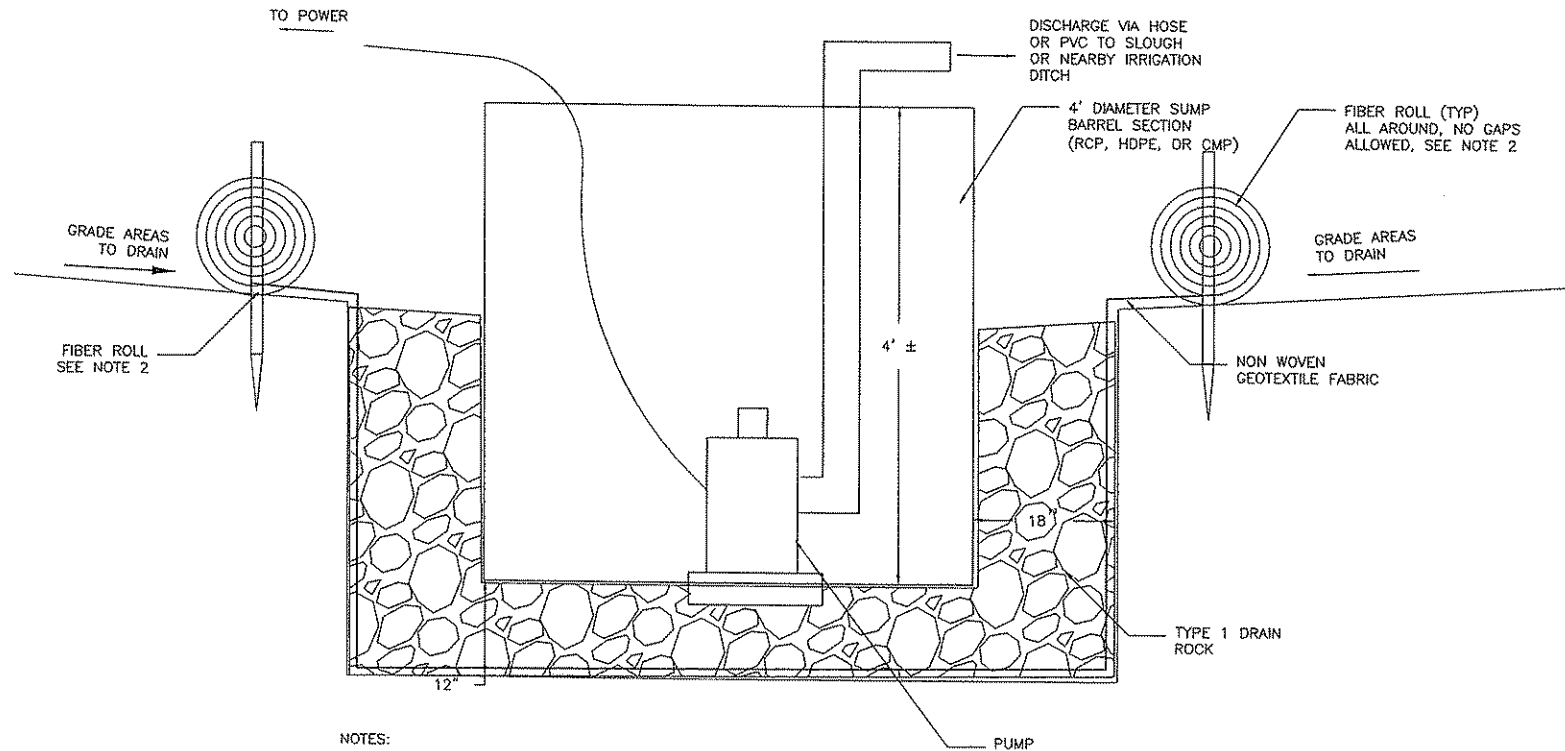
Civil DETAILS 3



1  
VAR  
DETAIL  
HOUSE KEEPING PAD  
NOT TO SCALE



2  
VAR  
DETAIL  
BOLLARD  
NOT TO SCALE



NOTES:


1. CONTRACTOR SHALL PROVIDE SUMP DRAINAGE AT LOCAL LOW POINTS LOCATED ON THE PLANS. CONTRACTOR SHALL PROVIDE DRAINAGE PUMPS (APPROX. 200 GPM) TO BE SET IN SUMP BARREL. CONTRACTOR SHALL SUPPLY ELECTRIC POWER AS NEEDED FOR SUMP PUMPS. GRADE SURROUNDING AREA TO DRAIN TO SUMPS.
2. FIBER ROLLS SHALL BE INSPECTED BEFORE AND AFTER STORM EVENTS AND REPLACED AS NEEDED TO PROVIDE FILTERING OF SURFACE RUNOFF.

3  
VAR  
DETAIL  
SITE DRAINAGE SUMP  
NOT TO SCALE

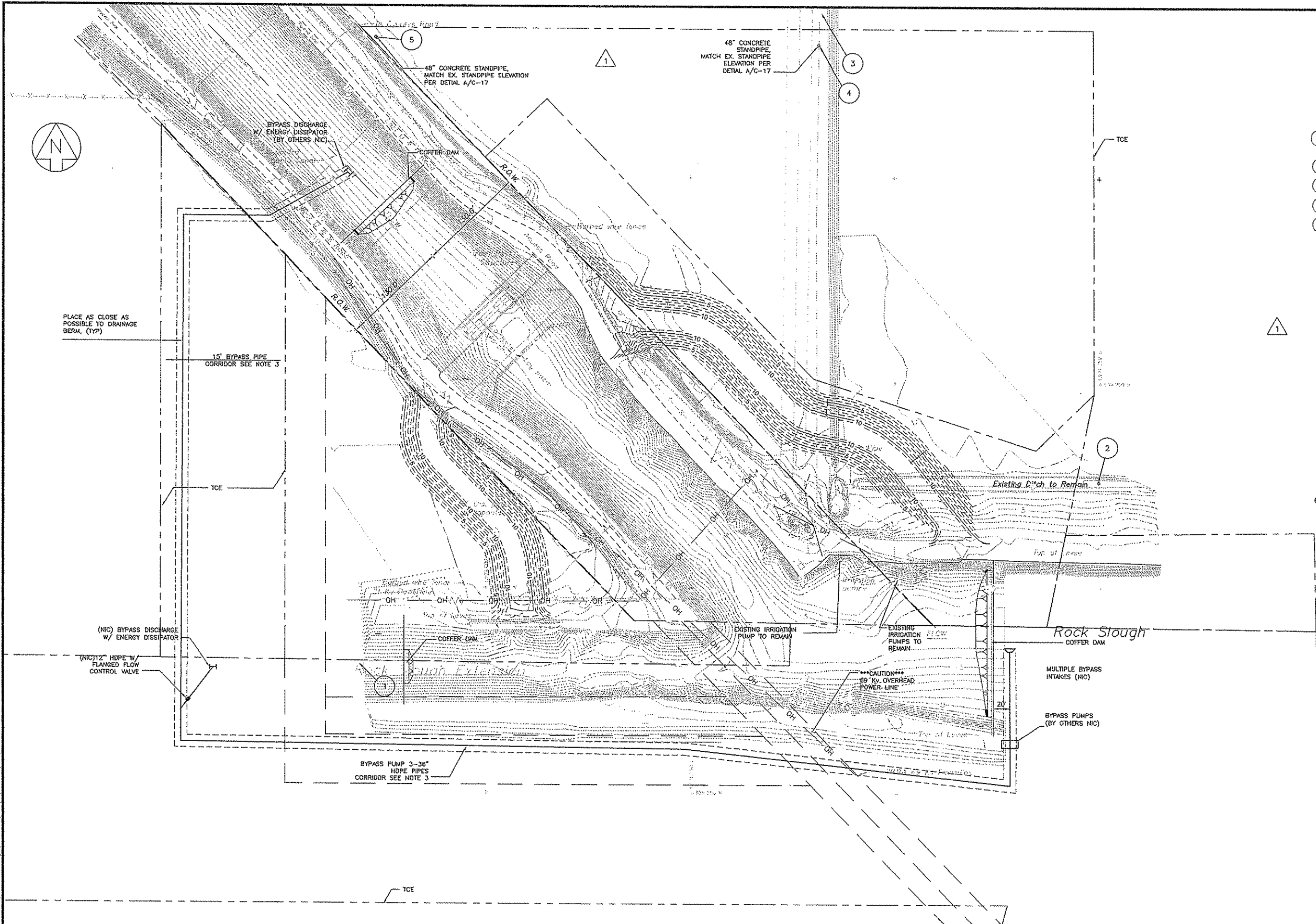
BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER	 <b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA
					CHECKED BY: P. BELLWS	
					DRAWN BY: F. BURKE	
					CHECKED BY: C. JOYCE	
					PROJECT NO.: 109085	FISH SCREEN STRUCTURE PHASE 2 LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA
					CAL GRID: AS SHOWN	
					ASSESSOR'S BOOK:	CML DETAILS 4
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	CAD FILE: D:\X-FSPH1-C19	
0	ISSUED FOR BID				PLOT DATE: 9/23/2009 11:22 AM	SHEET 24 OF 28
DATE: 07/13/2009						DRAWING NO. D-13048
						CONSULTANT NO. C-19
						REV. 1





- TEMPORARY IRRIGATION LOCATIONS (NOTE 6)
- ① ROCK SLOUGH EXTENSION - 3500 gpm AND MAINTAIN WATER LEVEL APPROX. EL. 4.00
  - ② IRRIGATION DITCH - UPTO 1000 gpm
  - ③ IRRIGATION DITCH - UPTO 1000 gpm
  - ④ 15" PVC PIPE - 3500 gpm
  - ⑤ IRRIGATION DITCH - UPTO 1000 gpm

- NOTES:
- 1. ALL BYPASS PUMPING SYSTEMS BY OTHERS.
  - 2. BYPASS PUMPING SYSTEM REQUIREMENT: PHASE 2 - 30 CFS; PHASE 3 - ADDITIONAL 170 CFS FOR A TOTAL 200 CFS.
  - 3. CONTRACTOR TO PROVIDE 15-FOOT CORRIDOR FOR BYPASS PUMP SYSTEM TO BE DONE BY OTHERS.
  - 4. CONTRACTOR SHALL PROVIDE PIPE RESTRAIN JOINTS AND PIPE ANCHORS PER MANUFACTURER RECOMMENDATIONS.
  - 5. CONTRACTOR SHALL COORDINATE WITH TANERA ON FISH DRIVE, FISH RESCUE AND INSTALLATION OF BLOCK NETS AS SPECIFIED IN SPEC SECTION 01010.
  - 6. CONTRACTOR TO PROVIDE TEMPORARY IRRIGATION FLOWS AS REQUIRED IN SPEC SECTION 01500.


PLAN  
SCALE: 1"=60'

BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	M. MAHER
					CHECKED BY:	P. BELLWS
					DRAWN BY:	F. BURKE
					CHECKED BY:	C. JOYCE
					PROJECT NO.:	109065
2	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	CAL GRID:	ASSESSOR'S BOOK:
1	REVISED PER ADDENDA 1	CJ	PB	07-09	CAD FILE:	PLOT DATE:
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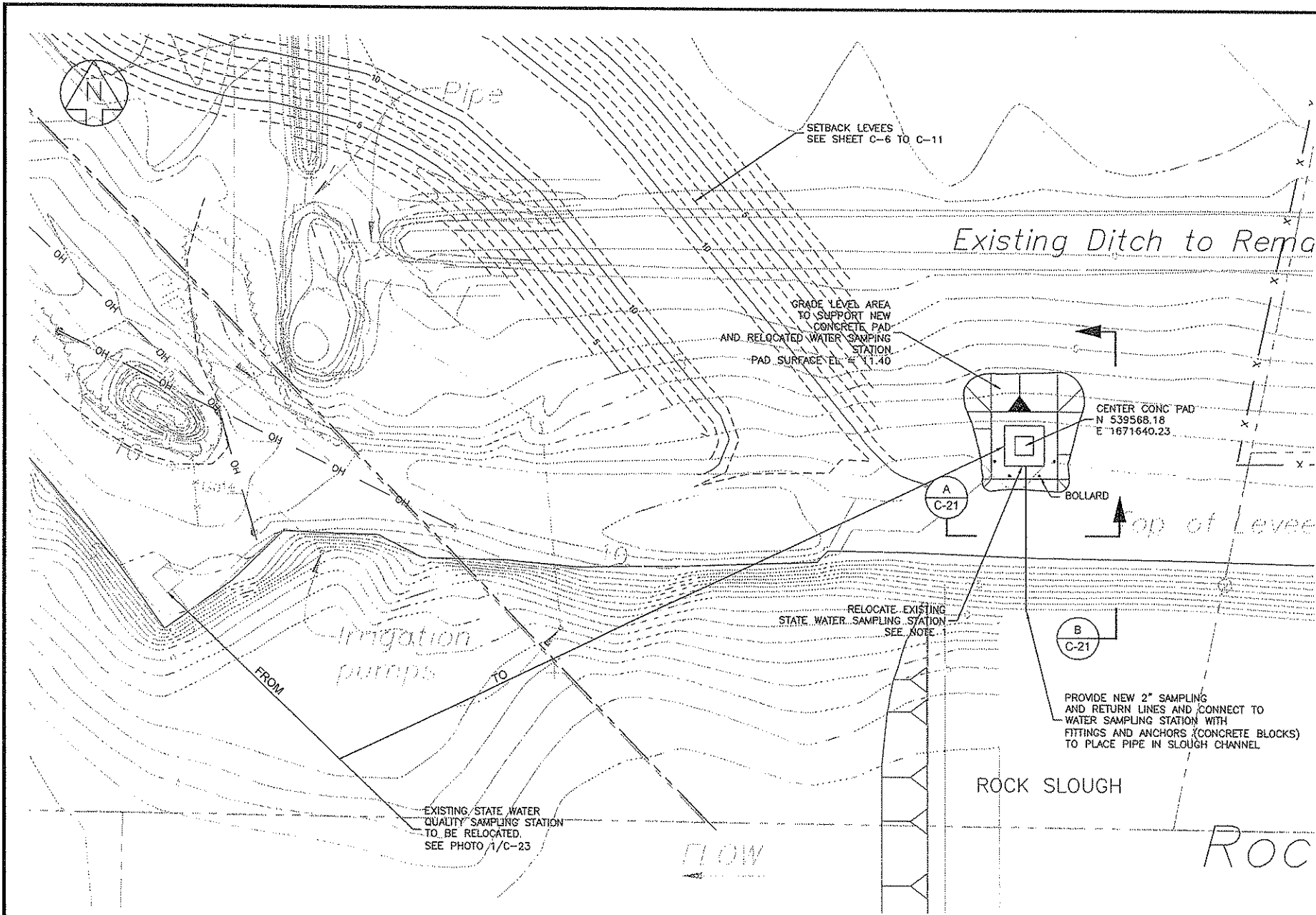
CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CONTRA COSTA  
TEMPORARY IRRIGATION AND  
BYPASS PUMPING PLAN

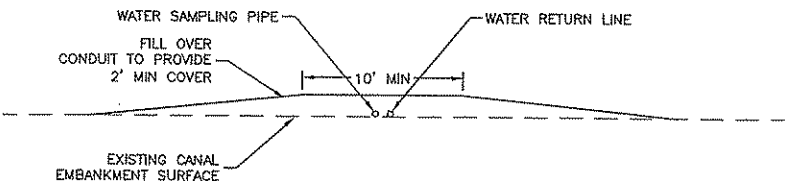
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25	NO.	NO.	
OF 28	D-13049	C-20	2

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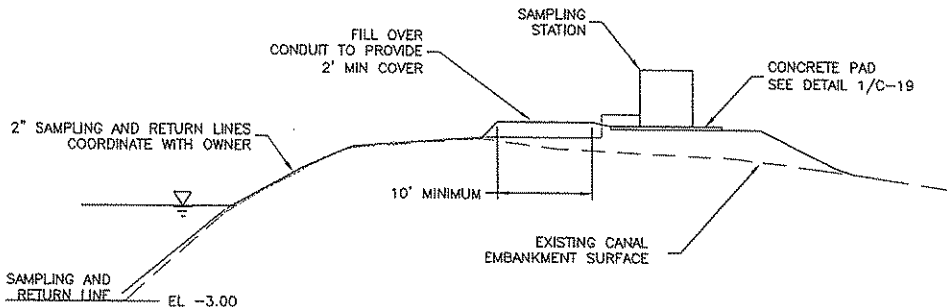
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Xref filename: X-TBLOOK-22X34 X-Property X-Fence X-Grading X-Topo



- NOTES:
1. CONTRACTOR SHALL GRADE LEVEL AREA 20 FEET BY 20 FEET AND CONSTRUCT NEW 12"x12"x8" REINFORCED CONCRETE PAD, WATER QUALITY SAMPLING STATION TO ATTACH ANCHOR BOLT (1/8" SPACING W/ 1/2" ANCHOR BOLT) TO NEW CONCRETE PAD. ALL EXISTING PIPING TO CANAL SHALL BE CONNECTED TO THE SAMPLING STATION. CONTRACTOR SHALL COORDINATE WITH OWNER FOR LOCATION AND ENSURE SATISFACTORY OF THE FACILITY.
  2. COMPACT FILL MATERIAL TO 95% RELATIVE COMPACTION, SEE SPEC SECTION 02220.



A FILL OVER CONDUIT - SECTION  
SCALE: NOT TO SCALE



B WATER SAMPLING LINE - SECTION  
SCALE: NOT TO SCALE

BROWN AND CALDWELL

CONFORMED

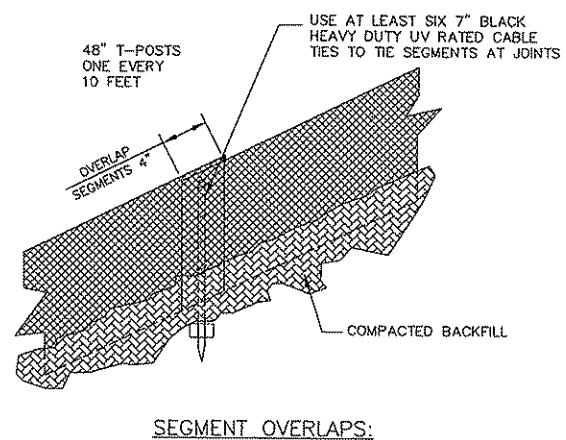
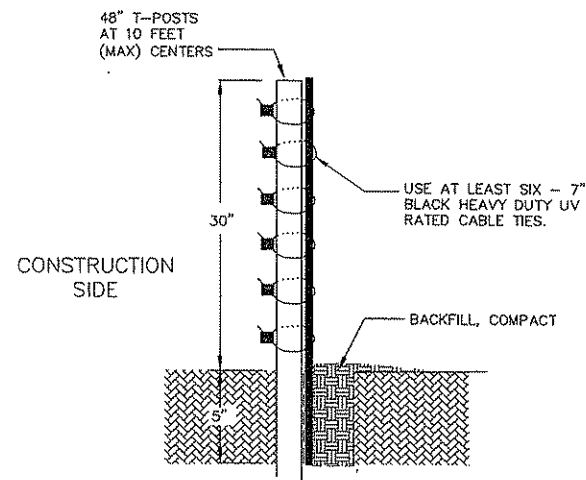
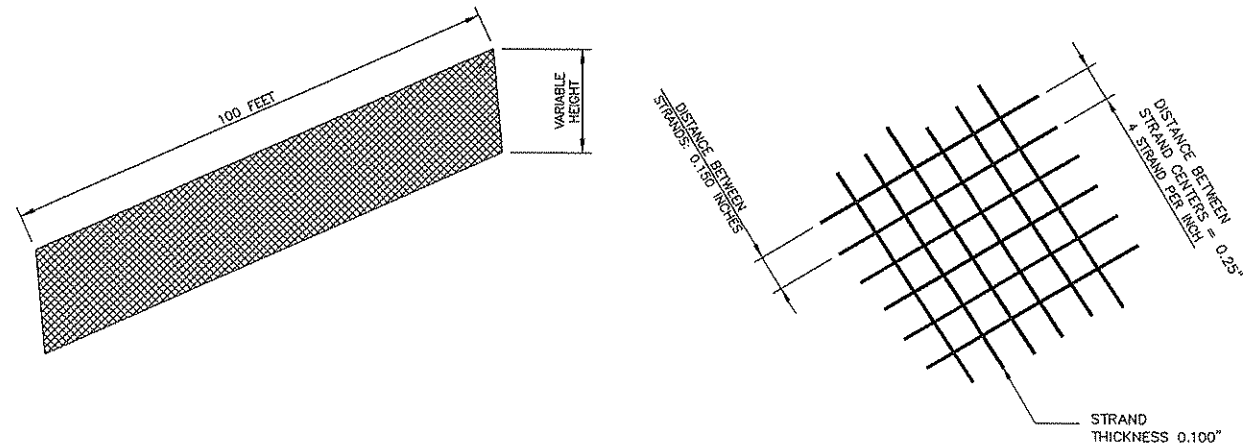
LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: ##	CHECKED BY: G-GENERAL	DRAWN BY: F. BURKE	CHECKED BY: C. JOYCE	PROJECT NO.: 109065	SCALE: 1"=20'	CAL GRID:	ASSESSOR'S BOOK:	CAD FILE: D-X-FSPH1-C-21	PLOT DATE: 8/24/2009 9:19 AM	SHEET 26 OF 28	DRAWING NO. D-13050	CONSULTANT NO. C-21	REV. 1
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/20/09														
0	ISSUED FOR BID																	



FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CYPRIA, CA

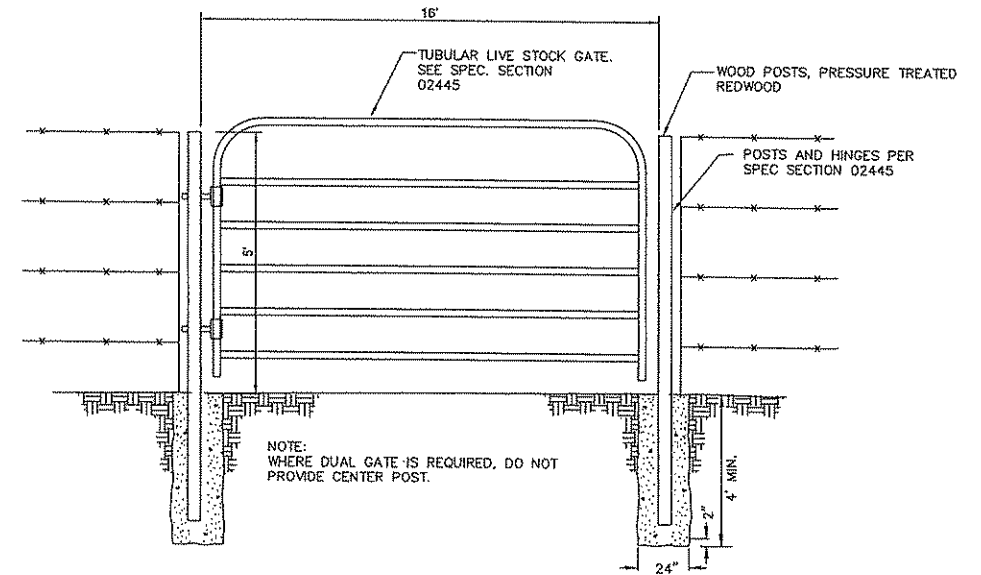
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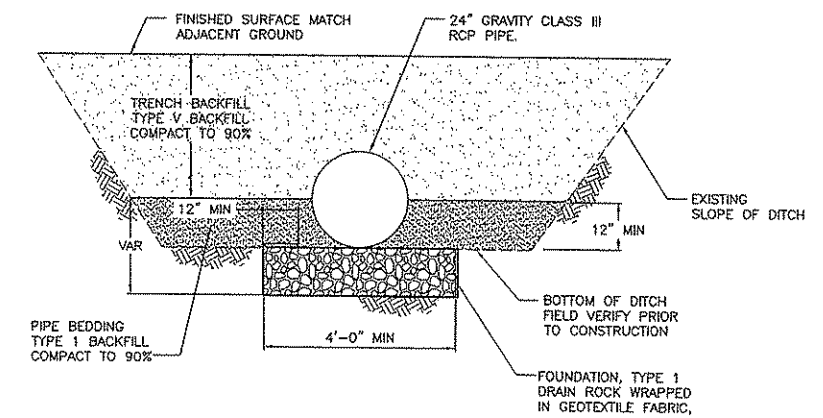
1  
VAR  
DETAIL  
SNAKE FENCE  
NO SCALE

#### SNAKE FENCE NOTES:

1. MATERIAL SHALL BE ERTEC, E-FENCE AND SHALL HAVE AN UNIT WEIGHT OF 0.16-0.19 LBS/SQFT.
2. FUNCTIONAL LIFE SHALL BE 6 YEARS MINIMUM.
3. SEGMENTS SHALL BE 100FT LONG.
4. MATERIAL SHALL BE RECYCLABLE AS #2 HDPE.
5. TENSILE STRENGTH SHALL BE 400 LBS PER ASTM D4595.
6. UV STABILITY SHALL BE 96% PER ASTM D4355.
7. STRAND DEFORMITY SHALL BE 0.375" AT 38 LBS PULL THROUGH AT 68" (F).
8. SERVICE TEMPERATURE SHALL BE -30 TO 160 DEGREES (F).



2  
C-15  
DETAIL  
TUBULAR LIVESTOCK GATE  
NO SCALE



3  
VAR  
DETAIL  
TEMPORARY CULVERT  
NO SCALE

BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: M. MAHER	
					CHECKED BY: P. BELLWS	
					DRAWN BY: F. BURKE	
					CHECKED BY: C. JOYCE	
					PROJECT NO.: 109065	SCALE: AS SHOWN
					CAL GRID:	ASSESSOR'S BOOK:
1	CONFORMED TO INCLUDE ADDENDA	MM	PB	08/2009	CAD FILE: D-X-FSPH1-C-22	PLOT DATE: 9/23/2009 11:23 AM
0	ISSUED FOR BID					

<b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA			
<b>FISH SCREEN STRUCTURE PHASE 2</b> LEVEES AND COFFERDAMS CONTRA COSTA CANAL, CVPIA, CA			
<b>FENCING DETAILS</b>			
SHEET 27 OF 28	DRAWING NO. D-13051	CONSULTANT NO. C-22	REV. 1



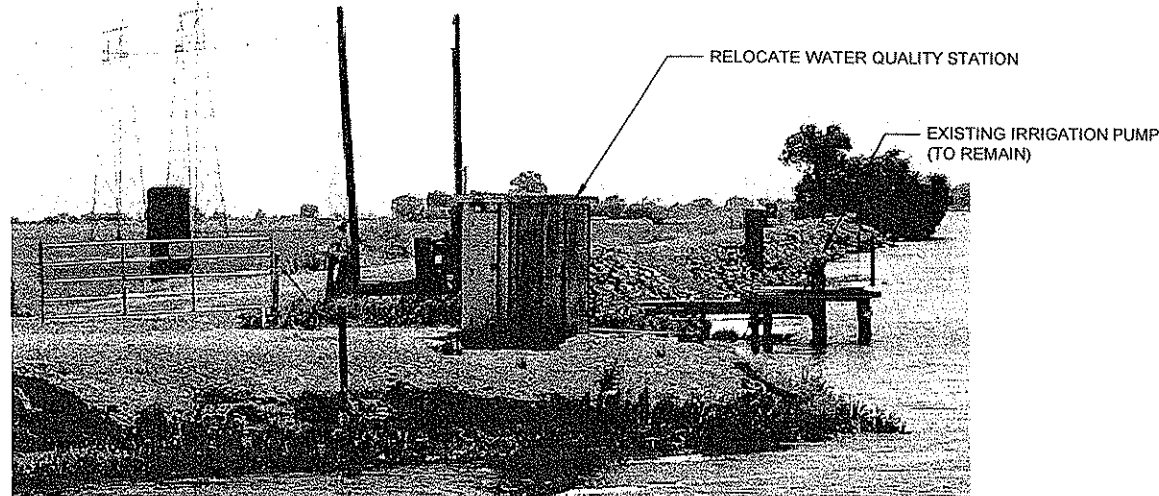


PHOTO ①



PHOTO ②

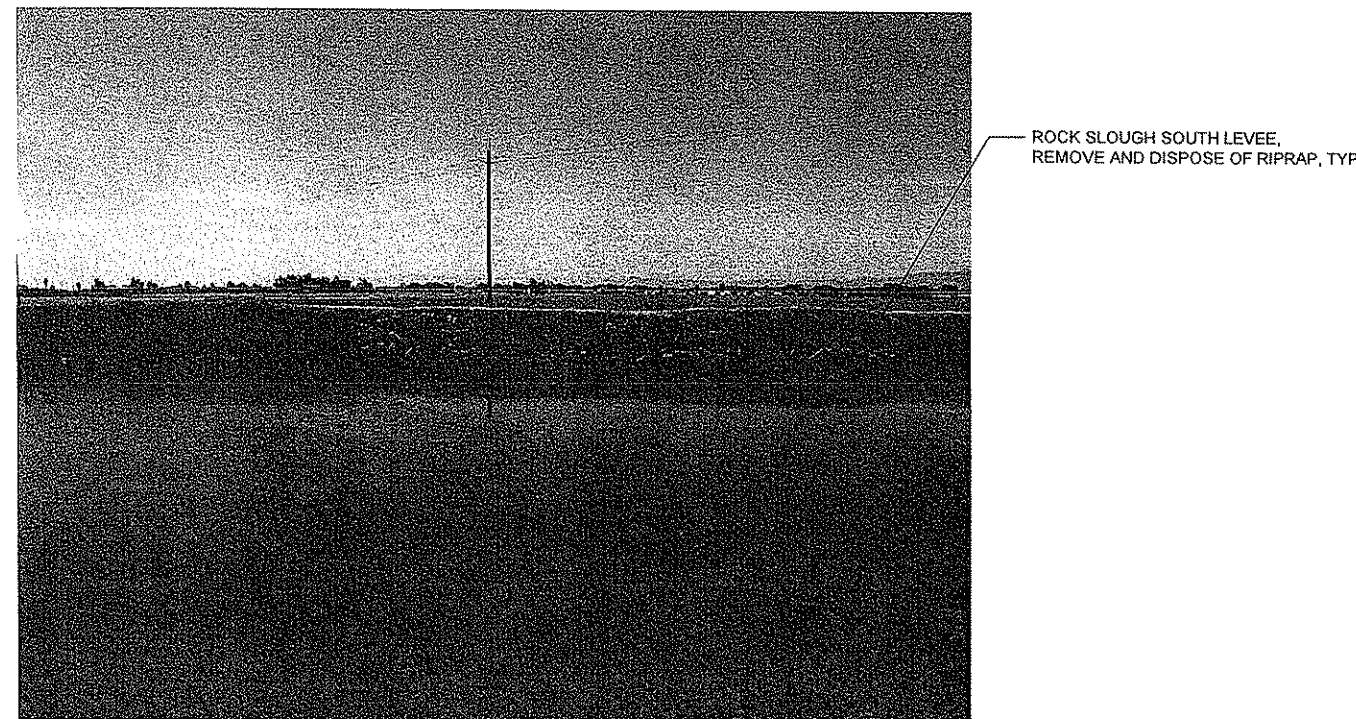


PHOTO ③

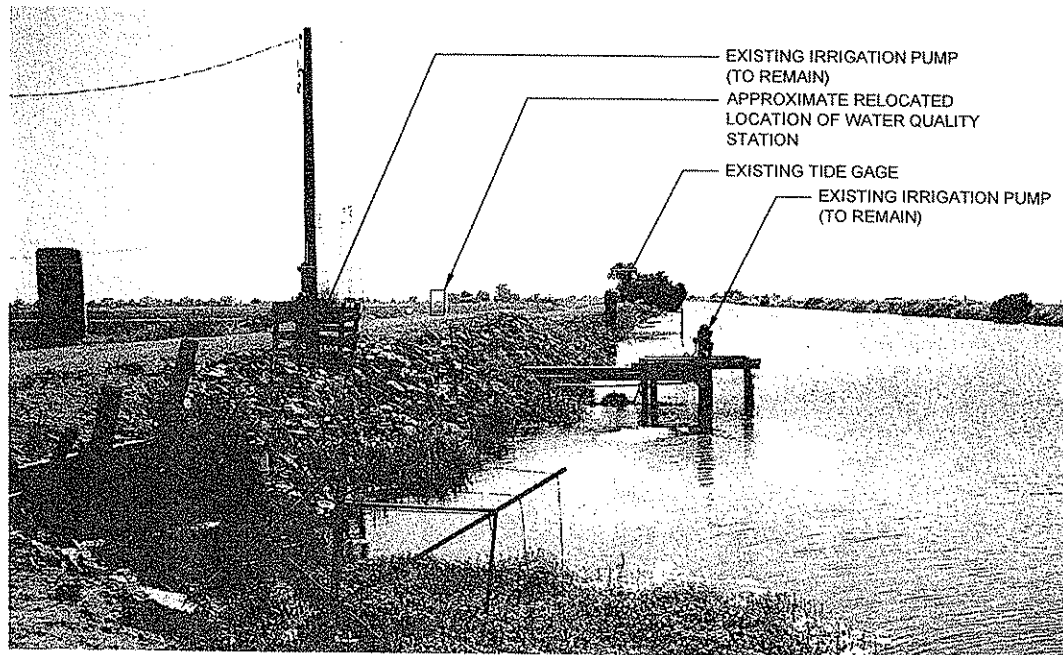


PHOTO ④

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Xref File Name: X-TIBLOCK-22X34


BROWN AND  
CALDWELL

CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"=SCALE ACCORDINGLY)

DATE: 07/13/2009

REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	M. MAHER
					CHECKED BY:	P. BELLOWS
					DRAWN BY:	F. BURKE
					CHECKED BY:	C. JOYCE
					PROJECT NO.:	109065
					SCALE:	NO SCALE
					CAL GRID:	ASSESSOR'S BOOK:
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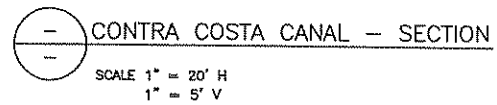


CONTRA COSTA  
WATER DISTRICT  
CONCORD, CALIFORNIA

FISH SCREEN STRUCTURE PHASE 2  
LEVEES AND COFFERDAMS  
CONTRA COSTA CANAL, CVPIA, CA


PHOTOS

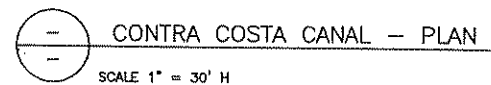
SHEET	DRAWING	CONSULTANT	REV.
28	NO.	NO.	
OF 28	D-13052	C-23	1



CONFORMED


LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"-SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY: ##	 <b>CONTRA COSTA WATER DISTRICT</b> CONCORD, CALIFORNIA	FISH SCREEN STRUCTURE, PHASE 2 LEVEE, CANAL AND GATE BRIMS CONTRA COSTA CANAL, CALIF. CA	<b>CONTRA COSTA CANAL SECTION</b>
						CHECKED BY: G-GENERAL			
						DRAWN BY: BC			
						CHECKED BY: KK			
						PROJECT NO.: 109085			
						CAL GRID:	ASSESSOR'S BOOK:		
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DATE: 07/13/2009	0	ISSUED FOR BID						SHEET VALUE OF 28	DRAWING NO. VALUE CONSULTANT NO. C-12 REV. ---



CONFORMED

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

	REV.	DESCRIPTION	BY	APP.	DATE	DESIGN BY:	##	 <div>CONTRA COSTA WATER DISTRICT CONCORD, CALIFORNIA</div> <div>FISH SCREENS AT RICHMOND, PHASE 2 - LEVEES LEVELS AND EXISTING DRAINAGE CONTRA COSTA CANAL, CA</div> <div>CONTRA COSTA CANAL SECTION</div>
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						DRAWN BY:	BC	
						CHECKED BY:	KK	
						PROJECT NO.:	109085	
						SCALE:	AS SHOWN	
						CAL GRID:	ASSESSOR'S BOOK:	
DATE: 07/13/2009	0	ISSUED FOR BID				CAD FILE: D:\X\FPHI-C-12	PLOT DATE: 9/23/2009 11:21 AM	<div>SHEET VALUE OF 2B</div> <div>DRAWING NO. VALUE</div> <div>CONSULTANT NO. C-12</div> <div>REV. ---</div>